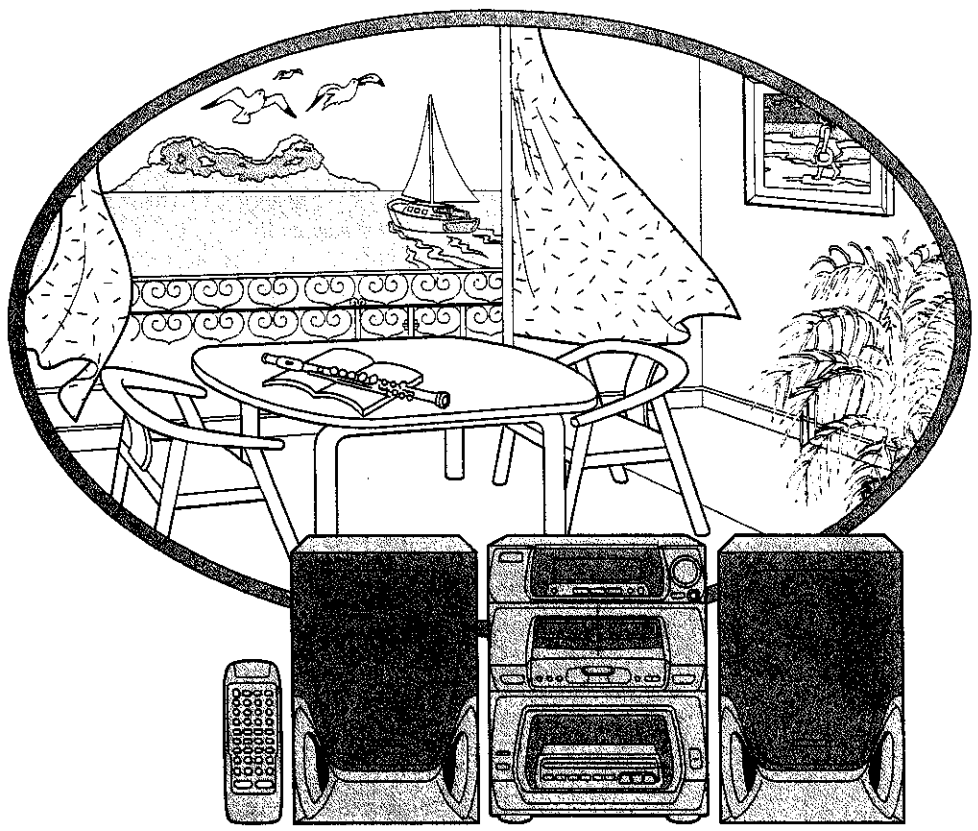
Panasonic®

CD Stereo System
SC-CH84M

Operating Instructions



The illustrations show SC-CH84M for United Kingdom.
The configuration of the speakers differs according to area.

Note:
The "EB" indication shown on the outside packing case indicates United Kingdom.

Before connecting, operating or adjusting this product, please read these instructions completely. Please save this manual.

COMPACT disc DIGITAL AUDIO

EB GN

RQT3357-B

Dear customer

Thank you for purchasing this product.
For optimum performance and safety, please read these instructions carefully.

These operating instructions are applicable to the following systems.

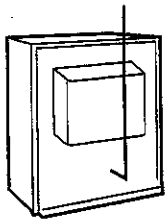
System	SC-CH84M	
Main unit	SA-CH84M	
Speakers	For United Kingdom	For Australia and N.Z.
	SB-CH84	SB-CH94

CAUTION!
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

CAUTION!
DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT IN CABINET OR IN ANOTHER CONFINED SPACE IN ORDER TO KEEP WELL VENTILATED CONDITION. ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION CONDITION TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING.

(Back of product)

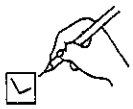
CLASS 1
LASER PRODUCT



DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.	(Inside of product)
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.	(Indersiden at apparatet)
VARO!	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTÖNTÄ LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.	(Tuotteen sisällä)
VARNING	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.	(Apparatens insida)
ADVARSEL	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.	(Produktets innside)
VORSICHT	UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.	(Im Inneren des Gerätes)

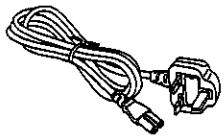
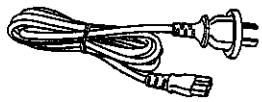
THIS MUSIC SYSTEM IS CAPABLE OF RECEIVING THE NEW AM STEREO BROADCASTS FROM THE AM BAND RADIO STATIONS. HOWEVER LIKE MANY MUSIC SYSTEM CURRENTLY AVAILABLE ON THE MARKET IT WILL REPRODUCE THIS AM STEREO SIGNAL ONLY IN AM MONO, WHICH, IN EFFECT, IS OF NO LESSER QUALITY THAN YOUR EXISTING AM MONO MUSIC SYSTEM.

Supplied accessories



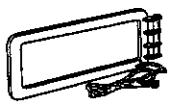
Please check and identify the supplied accessories

☐ AC power supply cord .....1 pc.
For United Kingdom (RJA0038-U)
For Australia and N.Z. (RJA0036-K)

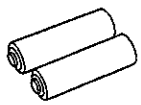
☐ FM indoor antenna .....1 pc.
For United Kingdom (RSA0007)
For Australia and N.Z. (RSA0006)

☐ AM loop antenna set (RSA0010)
- AM loop antenna .....1 pc.
- AM antenna holder .....1 pc.
- Screw .....1 pc.

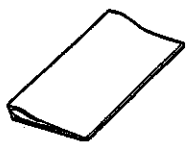


☐ Remote control transmitter .....1 pc.
(EUR642173)

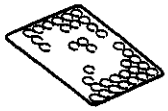
☐ Batteries (UM-4, "AAA", R03) .....2 pcs.



☐ Notebook-like binder .....1 pc.
[Liner notes organizer]
(RFA0622-K1)



☐ Adhesive number .....1 pc.
(RQLA0321)



☐ Antenna plug adaptor (SJP9009) .....1 pc.
(United Kingdom only)

Use numbers indicated in parentheses when asking for replacement parts.

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Caution for AC mains lead

(For United Kingdom)

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ⓐ or the BSI mark ⓚ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

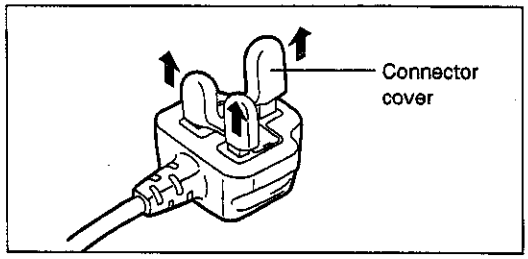
As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol ⏚.

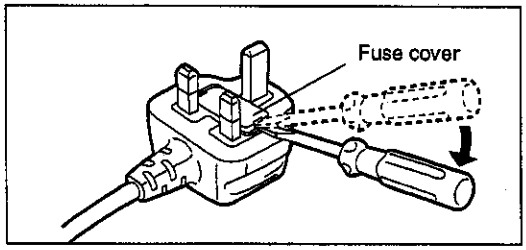
Before use

Remove the connector cover as follows.

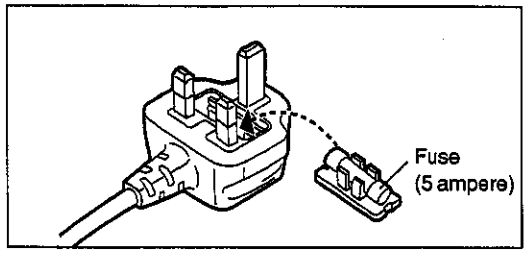


How to replace the fuse

1. Remove the fuse cover with a screwdriver.



2. Replace the fuse and attach the fuse cover.

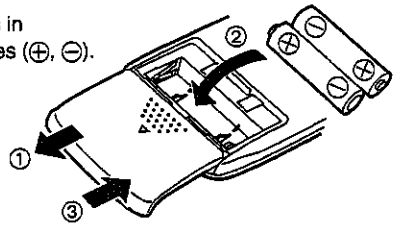


Concerning the remote control

Battery installation

Insert the batteries with this unit as shown below.
Use two UM-4 "AAA", IEC R03 (1.5 V) or equivalent batteries.

Insert the batteries in the correct polarities (⊕, ⊖).



Use of batteries

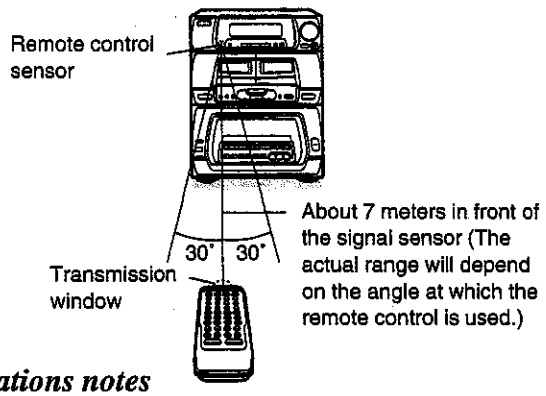
- Do not mix old and new batteries, or batteries of different types (manganese and alkaline, etc.).
- Never subject batteries to excessive heat or flame; do not attempt to disassemble them; and be sure they are not short-circuited.
- If the remote control is not to be used for a long period of time, remove the batteries and store them in a cool, dark place.
- Do not attempt to recharge alkaline or manganese batteries.
- Do not use rechargeable type batteries.

Battery life

The battery life is about one year.

The batteries should be replaced if commands from the remote control transmitter do not operate the unit even when the transmitter is held close to the front panel.

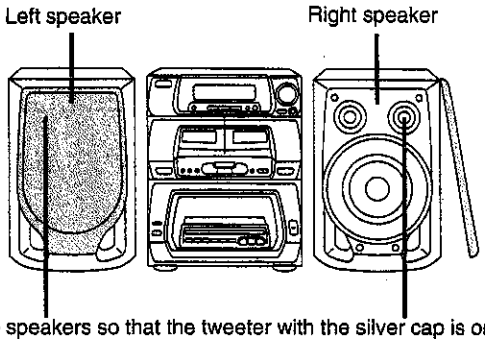
Correct method of use


Remote control sensor
About 7 meters in front of the signal sensor (The actual range will depend on the angle at which the remote control is used.)
30°
30°
Transmission window

Operations notes

- Aim the remote control's transmission window toward the unit's sensor. Avoid any obstacles.
- Be sure the transmission window and the unit's sensor are free from dust. Excessive dust might affect its performance.
- The operation may not be correct if direct sunlight or other strong light source strikes the receiving sensor of this unit. If there is a problem, place the unit away from the light source.
- If this system is installed in a rack with glass doors, the glass doors' thickness or color might make it necessary to use the remote control a shorter distance from the system.
- Never place heavy items.
- Do not disassemble or reconstruct.
- Do not spill water or other liquids.

Placement of speakers



Set the speakers so that the tweeter with the silver cap is on the outside.
(For United Kingdom)
Speakers are symmetrically the same on the inside, so you don't have to orient them in a certain one or another.

For your reference
For your listening pleasure, keep your speakers from touching the stereo.

Caution
Use this speaker only with the recommended system. Failure to do so may lead to damage to the amplifier and/or the speaker, and may result in the risk of fire. Consult a qualified service person if damage has occurred or if you experience a sudden change in performance.

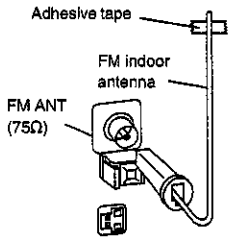
Connections

Basic connections (for supplied accessories)

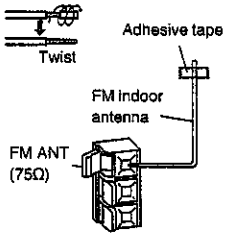
For Australia and N.Z.
The configuration of AC mains lead and FM antenna terminal are different.

1 FM indoor antenna

For United Kingdom



For Australia and N.Z.

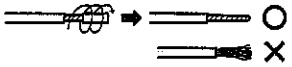


Attach to a wall (using tape) facing in the direction of best reception.

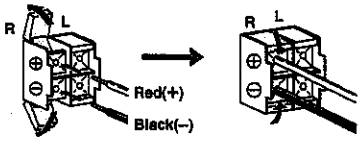
For best reception sound quality:
An FM outdoor antenna is recommended.
Disconnect the FM indoor antenna if an FM outdoor antenna is installed.

3 Speaker cords

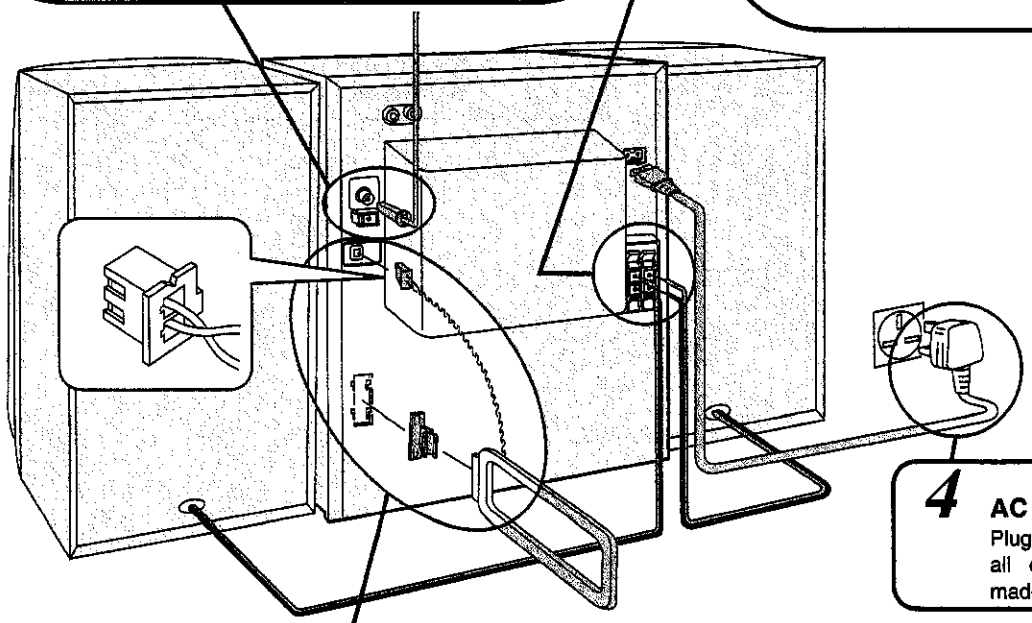
① Strip off the outer covering, and twist the center conductor.



② Match the cords to the terminals by color and connect.



Note
To prevent damage to circuitry, never short-circuit positive (+) and negative (–) speaker wires.

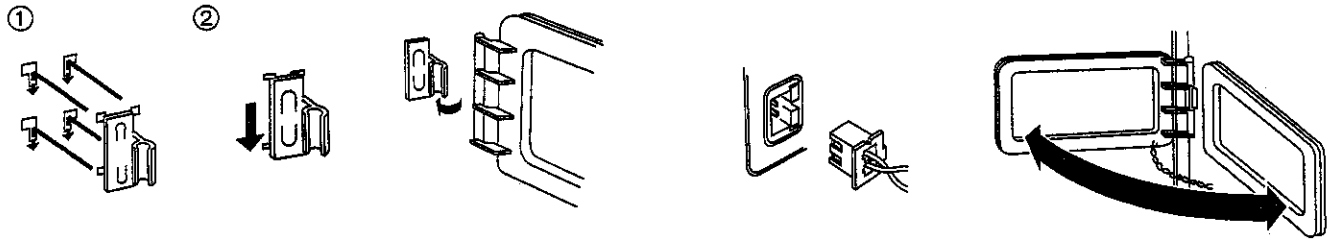


4 AC power supply cord

Plug the cord into an outlet only after all other connections have been made.

2 AM loop antenna

1. Attach the antenna holder to the rear panel. Press the antenna holder hard enough to get it fixed firmly in place, with a click.
2. Clamp the antenna to the antenna holder.
3. Connect the antenna terminal to the rear panel of the unit.
4. While listening to an MW (AM) broadcast, position the loop antenna for the best reception.



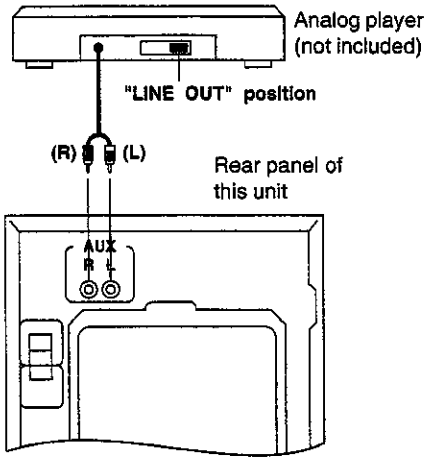
External unit connection

- For details, refer to the instruction manual of the units which are to be connected.
- When units other than those described below are to be connected, please consult with your audio dealer.

Analog player

Only an analog player with a built-in phono equalizer can be connected.
This example shows how to connect the analog player with the PHONO OUT/LINE OUT switch.

Set the switch to the "LINE OUT" position at the back of the analog player.

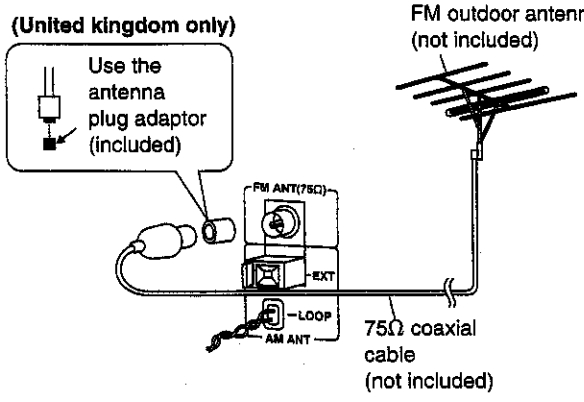


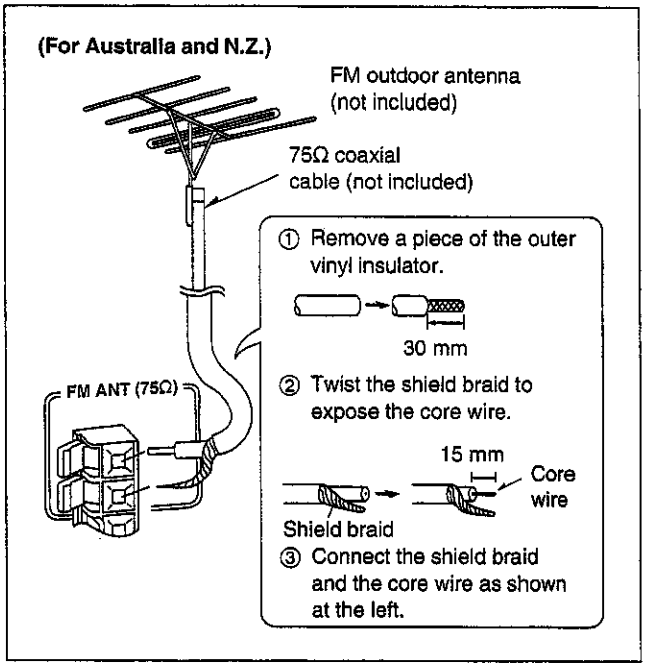
Optional antenna connections

You may need an outdoor antenna if you use this system in a mountainous region or inside a reinforced-concrete building, etc.

FM outdoor antenna

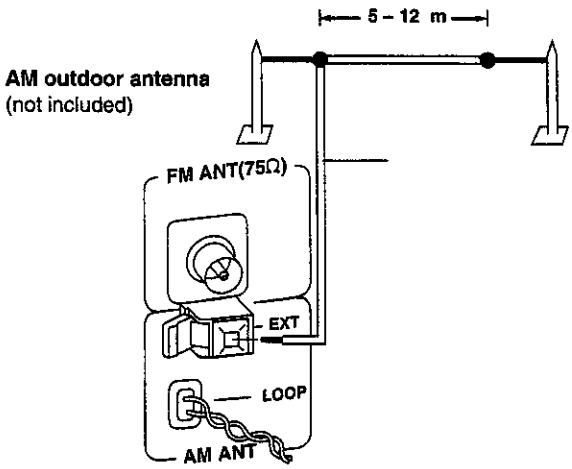
Note
An outdoor antenna should be installed by a competent technician only.




(For Australia and N.Z.)
FM outdoor antenna
(not included)
75Ω coaxial
cable (not included)
① Remove a piece of the outer vinyl insulator.
30 mm
FM ANT (75Ω)
② Twist the shield braid to expose the core wire.
15 mm
Core
wire
Shield braid
③ Connect the shield braid and the core wire as shown at the left.

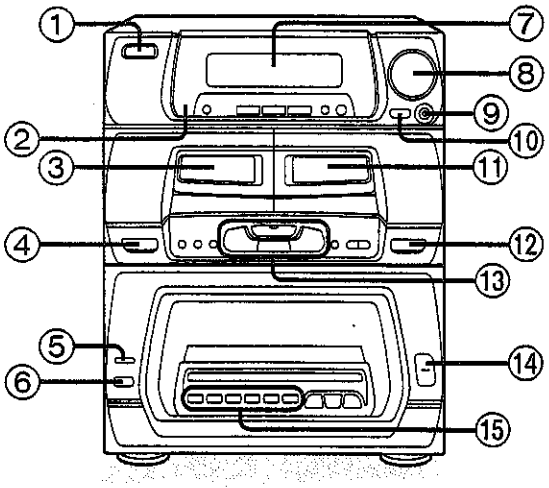
AM outdoor antenna (not included)

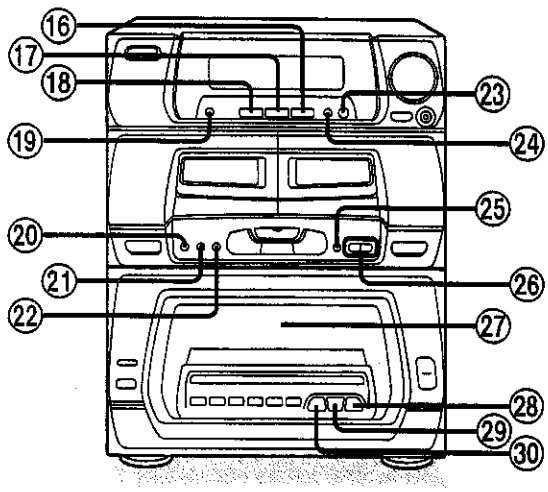
Connect the outdoor antenna without removing the AM loop antenna. Run 5 to 12 m of vinyl-covered wire horizontally along a window or other convenient location.



Note
When the unit is not in use, disconnect the outdoor antenna to prevent possible damage that may be caused by lightning. Never use an outdoor antenna during an electrical storm.

Front panel controls

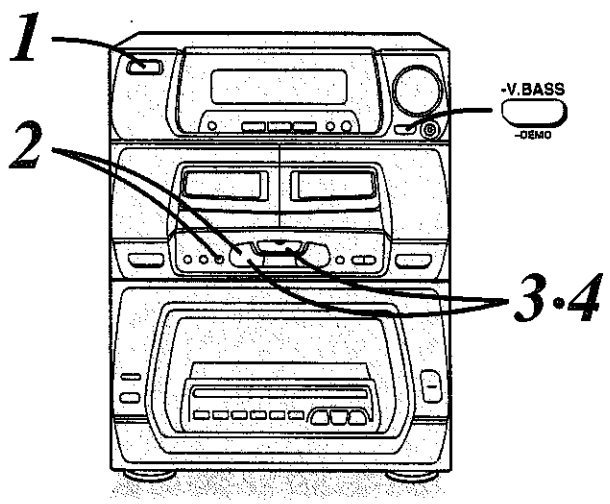




No.	Name	Ref. page
①	**Power "STANDBY ⏻/ON" switch (POWER, STANDBY ⏻/ON)** Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.	*9*
②	**Remote control signal sensor**	*5*
③	**Deck 1 cassette holder**	*24*
④	**Deck 1 cassette open button (⏏ OPEN, DECK 1)**	*24*
⑤	**CD edit button (CD EDIT)**	*31*
⑥	**Single play button (SINGLE PLAY)**	*14*
⑦	**Display**	
⑧	**Volume control (VOLUME)**	*11*
⑨	**Headphones jack (PHONES)**	*42*
⑩	**V. BASS/DEMO button (-V. BASS/–DEMO)**	*26*
⑪	**Deck 2 cassette holder**	*28*
⑫	**Deck 2 cassette open button (⏏ OPEN, DECK 2)**	*28*
⑬	**Basic operating buttons** Buttons change according to the source.	*10, 13, 24*
⑭	**Disc skip/group name select button (DISC SKIP/GROUP NAME)**	*13, 15*
⑮	**Group file select buttons (GROUP FILE)**	*15*

No.	Name	Ref. page
⑯	**Tuner/band select button (TUNER/BAND)**	*10*
⑰	**CD button (CD)**	*13*
⑱	**Tape/deck select button (TAPE, DECK 1/2)**	*24*
⑲	**Record timer/play timer button (◴ REC/◴ PLAY)**	*34, 36*
⑳	**Reverse mode select button (REV MODE)**	*24*
㉑	**Dolby noise reduction button (DOLBY NR)**	*24*
㉒	**Clock/timer button (CLOCK/TIMER)**	*33, 35*
㉓	**EQ space selection button (EQ SPACE)**	*26*
㉔	**AUX button (AUX)**	*42*
㉕	**Recording start/stop button (REC START/STOP)**	*28*
㉖	**Tape edit buttons (TAPE EDIT NOR, HIGH)**	*32*
㉗	**Window**	
㉘	**Group name enter button (NAME ENTER)**	*15*
㉙	**Group disc enter button (DISC ENTER)**	*16*
㉚	**Group mode select button (MODE)**	*13*

Setting the time



- The built-in demo function will run automatically shortly after you plug in the system (see page 26).
- The demo function in the power standby mode will be cancelled automatically by setting the time.

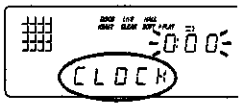
This is a 24-hour display clock.
This example in the figure shows how to set the time for 18:25 (6:25 p.m.).

1 STANDBY⏻/ON

Switch on the power.

2 CLOCK/TIMER

① Press CLOCK/TIMER to show "CLOCK".



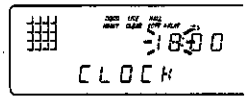
Within 7 seconds:

MEMORY/SET

② Press MEMORY/SET.

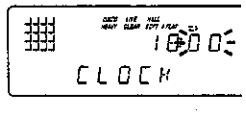
3 ∨ TUNING/TIME ADJUST ∧

① Press ∨ or ∧ to select the hour.



MEMORY/SET

② Press MEMORY/SET.



4 ∨ TUNING/TIME ADJUST ∧

① Press ∨ or ∧ to select the minutes.

MEMORY/SET

② Press MEMORY/SET to finish setting the time.

The clock now starts.
The display will return to the previous display after about 5 seconds.

When "0:00" flashes or the demo function is running:

This happens when you connect the AC power supply cord for the first time or if there has been a power failure.
If this happens, reset the time.

If the minutes setting has gone wrong:

1. Press CLOCK/TIMER.
2. Press MEMORY/SET twice.
3. Press ∨ or ∧ to set the minutes, and then press MEMORY/SET.

To display the clock again:

Press CLOCK/TIMER.
The display will return to the previous display after about 7 seconds.

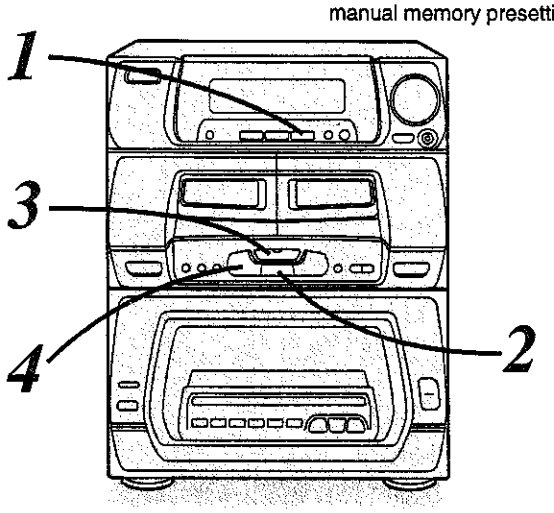
For your reference

The hour indication will not change when the minutes pass from "59" to "00".

Demo function while the power is on:
When the input source is set to "CD" or "TAPE", the demo function will run automatically after about 2 minutes or more in the stop mode.
You can cancel the demo function by pressing and holding -V.BASS/–DEMO for about 2 seconds or more.

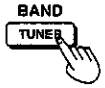
Memory presetting

- If broadcast frequencies are preset in the memory, you can easily tune in any of these frequencies from the system or remote control unit.
- Up to 12 stations can each be set in the FM, LW and MW bands (For Australia and N.Z: FM and AM bands) with the automatic or manual memory presetting.

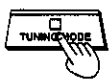


Automatic memory presetting

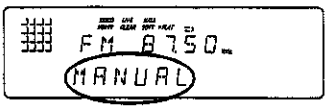
This example in the figure shows how to preset stations in the FM band.

1 

(For United Kingdom)
Press TUNER BAND to select "FM", "LW"or "MW".
(For Australia and N.Z.)
Press TUNER BAND to select "FM" or "AM".
The power will come on automatically, even if the stereo is on standby.

2 

Press TUNING MODE to select "MANUAL".
Each time you press the button, "MANUAL" and "PRESET" will appear alternately.



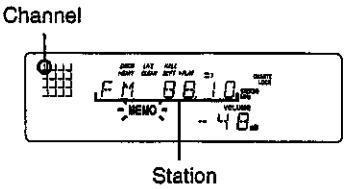
3

Press ∨ or ∧ until the display shows the frequency from which you want to begin automatic memory presetting.
Holding the button down will scroll the frequency. Repeatedly tapping on it will change the frequency one step with every touch.
While scrolling, if the radio picks up a station, it will automatically tune it in (auto tuning).

4

Press and hold MEMORY/SET.
Release the button when the frequency display begins to change.
The unit will automatically memorize the received broadcast frequencies in sequence.

The moment the frequency is memorized
The station and channel will be displayed for about 1 second.



When auto memorization is complete
The last station to be memorized will be left on the display.

To confirm the preset stations:

1. Press TUNING MODE to select "PRESET".
2. Press ∨ or ∧.

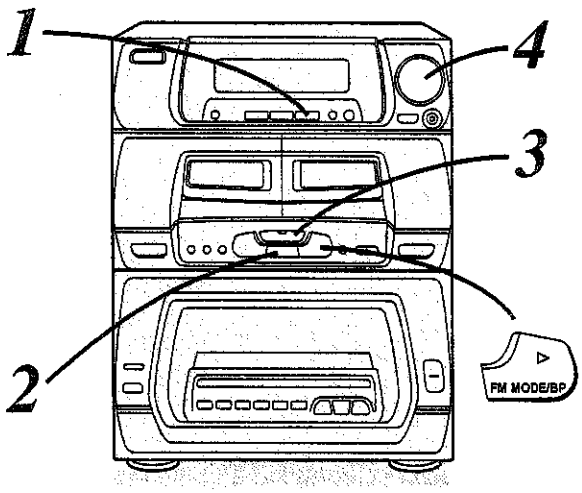
Note
Auto memory presetting does not work when radio waves from the broadcasting station are too strong or too weak.
In such case, carry out presetting manually. (See below.)

Manual memory presetting

(After step 2)
1. Press ∨ or ∧ to select the desired frequency, and press "MEMORY/SET". ("MEMO" flashes.)
2. Press ∨ or ∧ to select the preset channel, and then press "MEMORY/SET" during "MEMO" flashes.
   "MEMO" indicator goes off.

Memory retention
The contents of the memory will continue to be stored for approximately 2 weeks, even if the power supply cord is disconnected.

Listening to radio broadcasts



Preset tuning

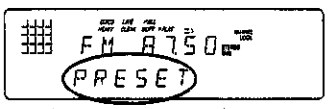
Be sure you've completed the steps in "Memory presetting" on page 10.
This example in the figure shows how to listen to FM preset channel 1.

1 BAND TUNER

(For United Kingdom)
Press TUNER BAND to select "FM", "LW" or "MW".
(For Australia and N.Z.)
Press TUNER BAND to select "FM" or "AM".
The power will come on automatically, even if the stereo is on standby.

2 TUNING MODE

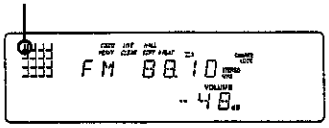
Press TUNING MODE to select "PRESET".
Each time you press the button, "MANUAL" and "PRESET" will appear alternately.



3 ∨ TUNING/TIME ADJUST ∧

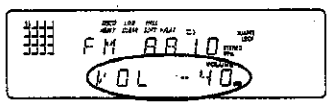
Press ∨ or ∧ to select the preset channel.
"STEREO" lights when an FM stereo broadcast is being received. "QUARTZ LOCK" lights when you precisely tune in a broadcast station.

Preset channel



4 VOLUME

Turn VOLUME to adjust the volume as you like.



Manual tuning

If the frequency is not known, use the tuning buttons for searching.

1. (For United Kingdom)
   Press TUNER BAND to select "FM", "LW" or "MW".
   (For Australia and N.Z.)
   Press TUNER BAND to select "FM" or "AM".
2. Press TUNING MODE to select "MANUAL".
   Each time you press the button, "MANUAL" and "PRESET" will appear alternately.
3. Press ∨ or ∧ to tune in the desired broadcast.
   Repeatedly tapping on the button will change the frequency one step with every touch. Holding it down will scroll the frequency. While scrolling, if the radio picks up a station, it will automatically tune it in (auto tuning).
   Note
   Tuning may stop automatically if any jamming is encountered.
4. Turn VOLUME to adjust the volume as you like.

Switching the mode from stereo to monaural while listening to an FM station:
Press FM MODE/BP.
The sound reception mode switches to "MONO" (monaural) and "MONO" lights.

When "MONO" indicator lights up:
Use this setting when listening to or recording in monaural. All sound reception including stereo sound, is in monaural.

When "MONO" indicator goes off:
Use this setting for normal listening. Both stereo and monaural sounds can be heard as they are.

For your reference:
If too much noise is produced in the FM stereo mode, press FM MODE/BP and check "MONO" lights up.
The sound will then be heard in monaural. If the broadcast signal is weak, or if there is a large amount of interference, you will get a clearer sound in "MONO" mode.

Note
You cannot memorize the stations in the "MONO" mode.

Listening to compact discs

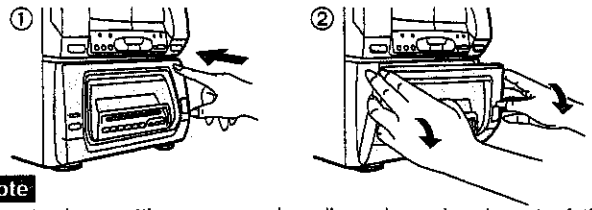
Setting/Removing discs

Special notes

- You can set discs in the rack and remove them too, while playing discs.
- Never set a disc in the slot of the disc being played.
- Sometimes the rack panel cannot be opened while a disc is playing. It is a question of time. In such case, wait until you can open it.
- Do not open the rack panel while the changer is changing discs.

How to set discs

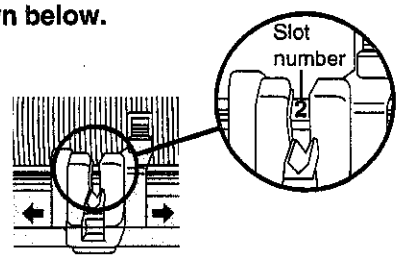
1. Open the rack panel.



Note

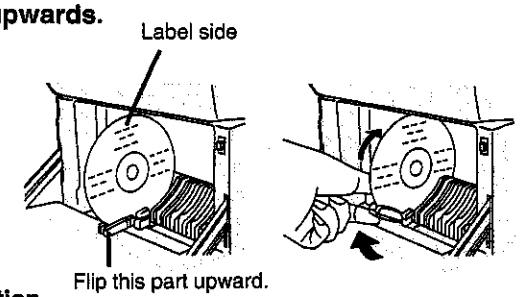
Except when setting or removing discs, keep hands out of the changer while open. You could injure yourself if somehow entangled in the internal mechanism.

2. Slide the loader carriage to the slot you want. You can read the numbers between the prongs as shown below.



Slot No. 0 (SINGLE) is reserved for single disc play (p. 14).

3. Set the disc on the loader and flip the loader upwards.



Caution

- Do not use 8 cm discs fitted with expander rings. Use the 8 cm discs as they are, to prevent damage to the slots from rings.
- Do not use cleaning discs, discs with stickers on the label side or warped discs. All of these could damage your changer.
- Do not put anything other than discs in the changer.
- Do not set a disc in the slot of the disc being played (slot flashes). The disc in play is returned to its slot when finished. If the two discs somehow jam the slot, one or both could be damaged. When this happens, the message "TAKE OUT" will appear on the display. Remove the disc that doesn't belong in the slot and close the rack panel.

Note

- Set discs with the label facing to the right.
- Never load more than one disc in any given slot.

4. Close gently the rack panel.

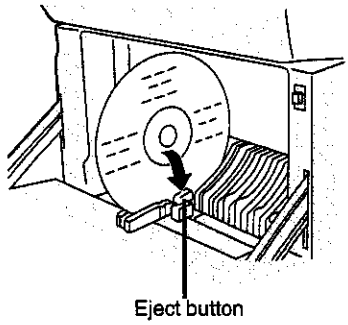
You will hear a catching sound when the rack panel closes.

How to remove discs

1. Open the rack panel.

2. Slide the loader carriage to the slot you want.

3. Press the eject button gently on the loader carriage.



Note

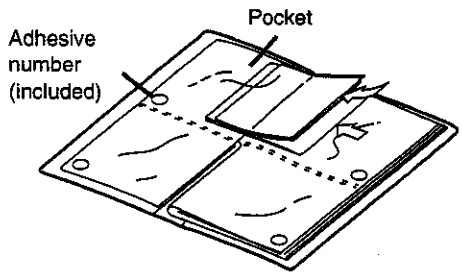
When removing CDs while the power is on, make sure the source is set to "CD" before removing CDs.

If you cannot remove the disc

1. Press CD.
2. Open the rack panel.
3. Slide the loader carriage to the slot of the disc you want to remove.
4. Press the eject button.

How to know what disc in what slot

Your changer comes with a notebook-like binder (liner notes organizer) in which you can keep your CD liners. There are also adhesive numbers for indicating slot numbers in the binder. This is a convenient way to keep track of what disc is in what slot.



Put two liners back-to-back inside each pocket, as shown above.

Note

Do not put CD cases in the binder.

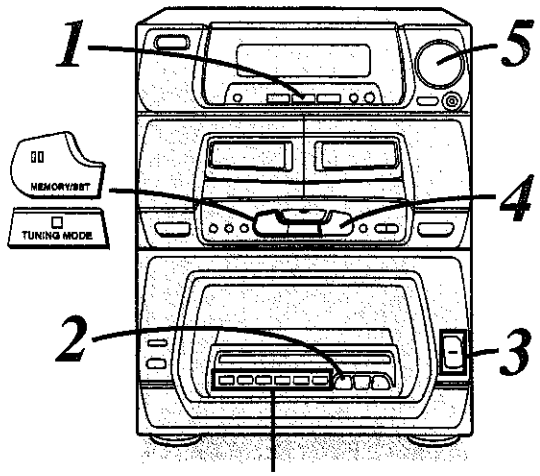
CDs playback modes

With this CD changer, you can playback CDs in the following 2 modes.

- Block mode...Normal sequential playback (page 13).
- Group mode...Only CDs registered in the selected group are played back (page 15).

Sequential play

The changer plays all the tracks on all the discs in order and stops automatically when the last track on the last disc finishes playing.



GROUP FILE buttons A–F

1

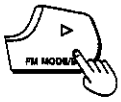
Press CD.
The power will come on automatically, even if the stereo is on standby.
While the changer checks which slots have CDs and which don't, you will hear the internal mechanism working. In the meantime, "SEARCH" will flash on the display.

2

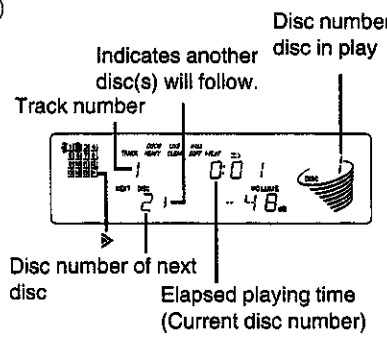
Press MODE to select "BLOCK".
Each time you press the button, "BLOCK" and "GROUP" will appear alternately.

3

Press either DISC SKIP/ GROUP NAME (∧ or ∨) until you reach the desired disc.
∧: Skips forward to next disc.
∨: Skips backwards to the preceding disc.

4 

Press ▶.
Play will begin.


Disc number of disc in play
Indicates another disc(s) will follow.
Track number
Disc number of next disc
Elapsed playing time (Current disc number)

The changer will play all CDs up through the one before the CD you started with, and it will stop automatically after playing the last track on it.

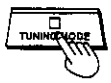
5

Turn VOLUME to adjust the volume as you like.

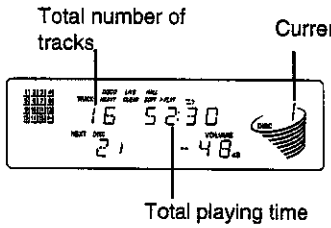
To temporarily stop play

Press ❚❚.
Press ▶ to resume play.

To stop play



Press ■.
The display will show the total number of tracks and the total playing time of the current disc.



The total playing time displayed includes the silent sections between tracks. For this reason, it may be a few seconds longer than the playing time indicated on the disc.
When you open the rack panel, the total number of tracks and the total playing time go out.
Press ▶ to re-start play.

Note
Outside light or noise may sometimes cause the changer to detect a disc when there isn't one. However, the changer always correctly detects the disc when in the play mode no matter what.

When " ⩾ " appears on the display
It indicates there are 16 or more tracks on the disc at the playing position.

When "NO DISC" appears on the display
It indicates there is no disc set in the slot.

For your reference
If you leave the front panel open while a disc is in play, when the disc is over, the changer will stop.

Convenient way to use the GROUP FILE buttons A–F
The changer automatically divides the CD rack up into 6 blocks as shown below.

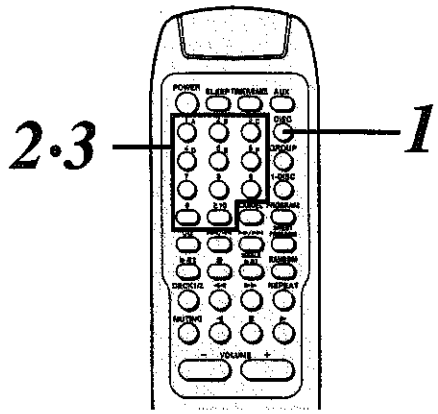
DISC SLOT	1–10	11–20	21–30	31–40	41–50	51–60
BLOCK	A	B	C	D	E	F

One way to organize yourself would be to arrange the blocks by band or solo artist. Within each block, you could then set the discs in chronological order from the earliest you have until the band's (artist's) most recent. In sequential play, discs will be played in the set order.

Sequential play

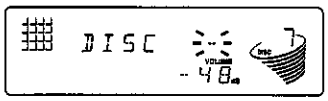
Listening to a particular track on a particular disc first

by remote control only

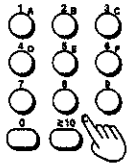


1 DISC

Press DISC.



2

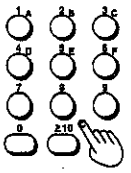


While "––" is flashing (approx. 10 seconds)

Press the numeric button(s) to select the desired disc.

If you want to start listening from the first track, you do not need to perform step 3.

3



Press the numeric button(s) to select the track.

The changer will play all CDs up through the one before the CD you started with, and it will stop automatically after playing the last track on it.

Selecting double-digit discs and tracks numbers

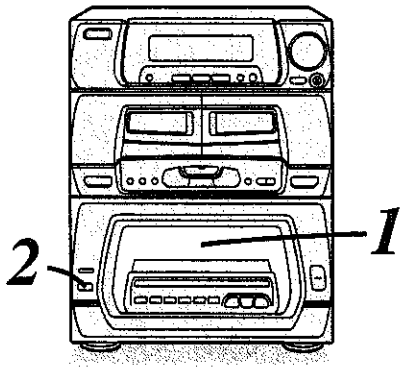
First press ≥10, and then press the numbers for the two digits.

For example: number 20

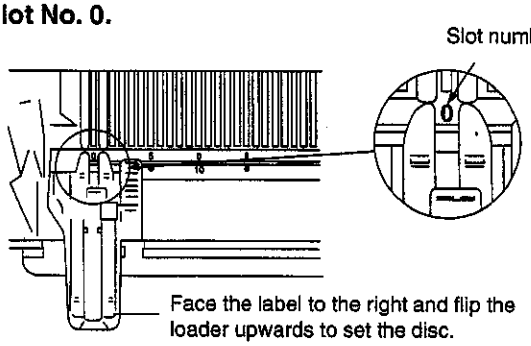
Press ≥10, then 2, and then 0.

Single disc play

Single disc play is for that special disc of yours, perhaps one you just bought. You see, the changer has a slot for one special disc which you can use even when the rack is full (max. 60 discs).



1 **Open the rack panel, and set the disc in the slot No. 0.**

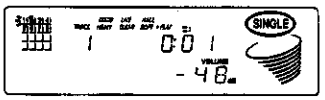


Face the label to the right and flip the loader upwards to set the disc.

2 SINGLE PLAY

Close the rack panel and press SINGLE PLAY.

The disc will start playing from the first track.



The changer plays all the tracks in order and stops automatically when the last track finishes playing.

To cancel single disc play mode

- Select another disc by pressing DISC and numeric buttons on the remote control.
- Skip to another disc with DISC SKIP/GROUP NAME. (See p. 23.)
- Select a group. (See p. 17.)
- In the block mode, press a GROUP FILE button (A–F).

For your reference

While "SINGLE" appears on the display, you can start play from the ► button as well as the SINGLE PLAY button.

Disc grouping play

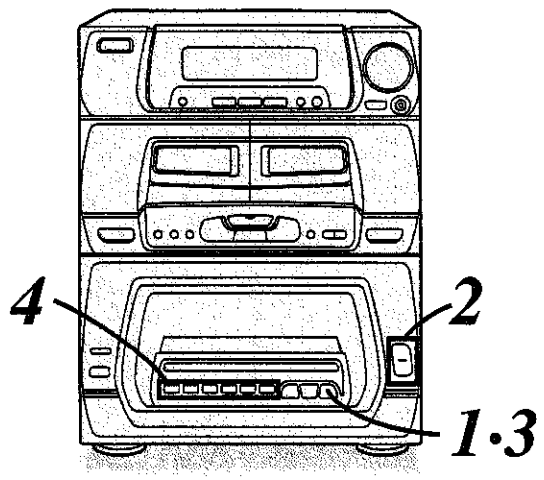
Sometimes, you want to block off your CDs into groups. For example, by the type of music, or your favorite CDs, etc. Well, this changer lets you make up to six groups, A through F. Basically, it's like dropping a disc into a box, then playing just discs from that box. What's more, you can name the groups with any of the preset names.

NAME	JAZZ	ROCK	...	FAVORITE
GROUP	A	B	...	F
DISC SLOT	1, 3, 5...	2, 10, 30...	...	1, 2, 11...

You can register up to 60 CDs including the same disc more than once.

To name groups

This example shows how to name group A "JAZZ".



1

Press NAME ENTER.

2

Press DISC SKIP/GROUP NAME to select the name you want.

Names change in rotation as shown below, every time you press ∨.

- To change the names in the reverse order, press ∧.

POP ← RESET ← BALLADS
↓ ↑
ROMANTIC CLASSIC
↓ ↑
PARTY JAZZ
↓ ↑
NEW AGE OLDIES
↓ ↑
HIP HOP ROCK
↓ ↑
FAVORITE BLUES
↓ ↑
DANCE → COUNTRY

3

Press NAME ENTER.

The group file select buttons (A–F) will flash.

4

Press the GROUP FILE button (A–F) for the group you want to name.

For example: To name group A

Press A.

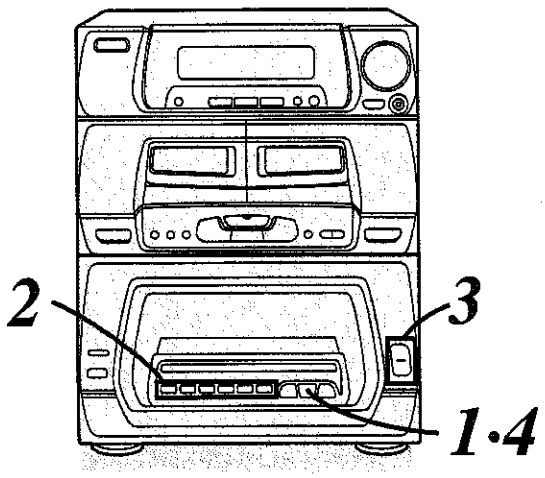
This will officially name group A "JAZZ".

5 **Repeat steps 1–4 to name other groups.**

Disc grouping play

Registering CDs under named groups

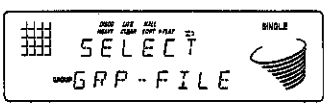
- Any single group can hold up to 60 CDs.
- You can enter the same CD into any single group as many times as you want.
- You cannot register the disc in slot No. 0, in your groups.

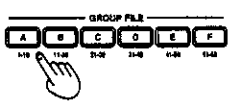


This example shows how to put disc 3 into the group "JAZZ" (group A).

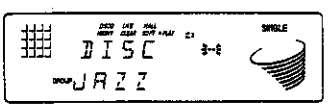
1

Press DISC ENTER.
The group file select buttons (A–F) will flash.



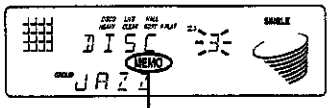
2 

Press the GROUP FILE button (A) for the group you want to register.



3 DISC SKIP/ GROUP NAME

Press DISC SKIP/GROUP NAME to select the disc you want.



Lights up

4

Press DISC ENTER.
"MEMO" will go out when the changer finishes processing your selection.

5 **Repeat steps 1–4 until you have completed all items.**

To check what discs are in what groups

1. Press MODE to select "GROUP".
2. Press the GROUP FILE button (A–F) you want and then press ■.
3. Press either DISC SKIP/GROUP NAME (∧ or ∨).
   Every time you press DISC SKIP, the next disc number in order is displayed.
   ∧: Numbers progress in regular order.
   ∨: Numbers progress in reverse order.

To cancel discs from groups

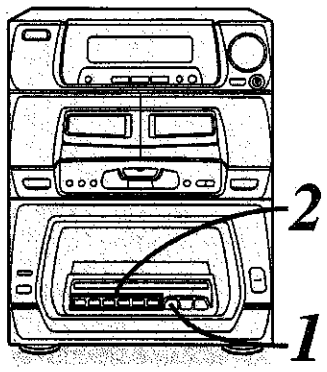
1. Press DISC ENTER.
   The group file select buttons (A–F) will flash.
2. Press CANCEL on the remote control.
   "CANCEL" appears on the display.
3. Press the GROUP FILE button (A–F) for the group you want to cancel.
4. Press DISC SKIP/GROUP NAME (∧ or ∨) to select the disc you want to cancel.
   "MEMO" lights.
5. Press DISC ENTER.
   "MEMO" will go out when the changer cancels the disc from the group.

Note

If you remove group-registered CDs from the rack, the changer automatically cancels their entries from the group.

To start play

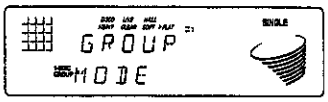
The changer will play only CDs in the selected group.



1

Press MODE to select "GROUP".

Each time you press the button, "BLOCK" and "GROUP" will appear alternately.



2

Press the GROUP FILE button (A–F) for the group you want to start play.

Before actually starting play, the changer will scroll disc numbers of the selected group from the smallest to the highest. Play will begin from the disc with the smallest number.

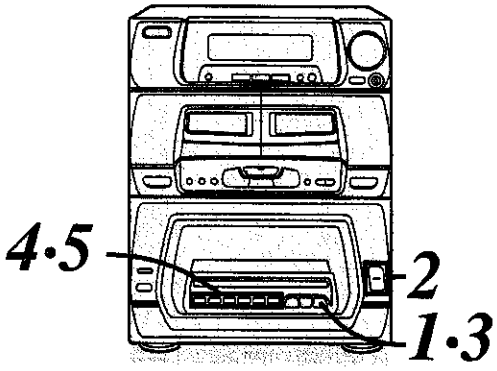
- If no discs have been registered, "– – → – –" will appear on the display.
- Unnamed groups will be displayed as "GROUP A, B, C" and so forth.

To cancel group play mode

(In the stop mode)
Press MODE to select "BLOCK".

Clearing groups names and discs

You can clear both the group name and all registered discs at the same time.



1

Press NAME ENTER.

2

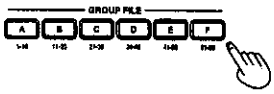
Press DISC SKIP/GROUP NAME to select "RESET".

POP ← RESET ← BALLADS
↓ ↑
ROMANTIC CLASSIC
↓ ↑
PARTY JAZZ
↓ ↑
NEW AGE OLDIES
↓ ↑
HIP HOP ROCK
↓ ↑
FAVORITE BLUES
↓ ↑
DANCE → COUNTRY

3

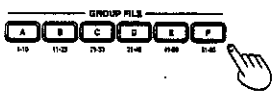
Press NAME ENTER.

The group file select buttons (A–F) will flash.

4 

Press the GROUP FILE button (A–F) of the group you want to clear.

(The name of the group will appear on the display.)

5 

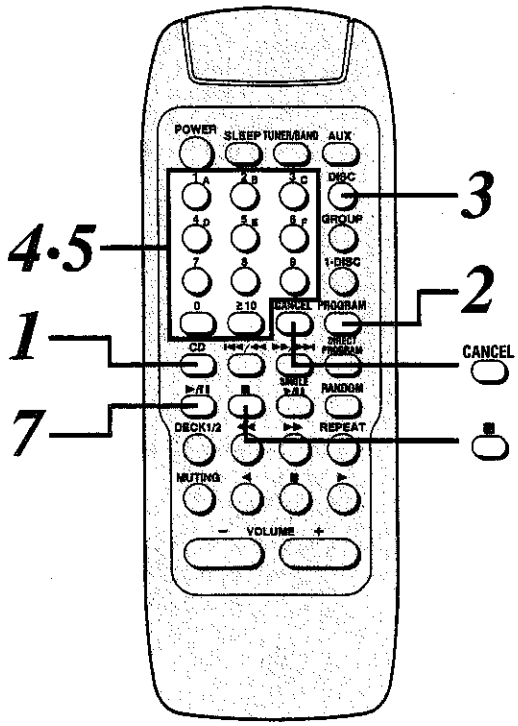
Press the same GROUP FILE button again.

This will clear the group name and registered discs.

Program play

by remote control only

Everyone has his/her favorite tracks. You can program the changer to play them in a specific order. With this changer, you can make one program and fill it with up to 24 selections from any of the discs in the rack.



This example shows how to program track 8 of disc 2.

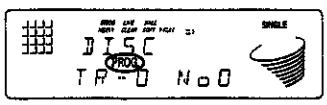
1 CD

Press CD.

2 PROGRAM

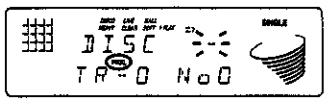
[In the stop mode]

Press PROGRAM.



3 DISC

Press DISC.



4

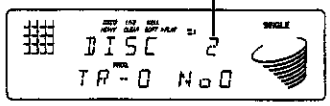
While "––" is flashing (approx. 10 seconds)

Select the disc(s) you want with the numeric buttons.

For example:

To select disc 2, press 2.

Specified disc number



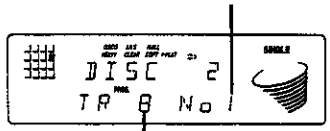
You can select slot No. 0.

"SINGLE" appears on the display.

5

Press the numeric button(s) to specify the track.

Program order



Specified track number

6

Repeat steps 3 to 5 until you have completed all entries.

7 ▶/❚❚

Press ▶/❚❚ to start play.

Play will start and tracks will be played in the programmed order. When all tracks have been played, play will stop automatically.

Selecting double-digit discs and tracks numbers

First press ≥10, and then press the numbers for the two digits.

For example: number 20

Press ≥10, then 2, and then 0.

To cancel program play mode

[In the stop mode]

Press PROGRAM.

The changer will return to the sequential play mode.

The programmed contents will remain stored in memory until they are cleared, even after the program mode is canceled.

Therefore, after programming, it is possible to cancel the program mode and use another play mode and then hear the same program again at a later time.

In addition, if discs are changed, the program will be played using the new discs. If non-existing entries are found at this time, the changer will cancel them.

For your reference

The program will remain stored in memory for approximately 2 weeks even after the unit is switched off.

When "FULL" appears.

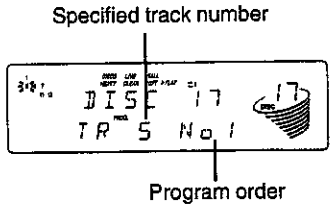
This indicates that an attempt has been made to program more than 24 tracks. No more than 24 tracks can be programmed.

To check programmed contents

(In the stop mode)

Press I◀◀/◀◀ or ▶▶/▶▶I.

The track and its place in the program will appear on the display.



To add an entry

(In the stop mode)

Repeat steps 3–5.

To clear a programmed track one by one:

1. (In the stop mode)
   Press CANCEL.
   "CANCEL" appears on the display.
2. Press DISC.
3. Select the disc you want to clear with the numeric buttons.
4. Press the numeric button(s) to specify the track.
   (The track you specified will be canceled.)
5. Press CANCEL.
   "CANCEL" goes out.

To clear all tracks

Press ■ once in the stop mode or twice in the play mode.
"CLEAR" appears on the display for approximately 1 second.

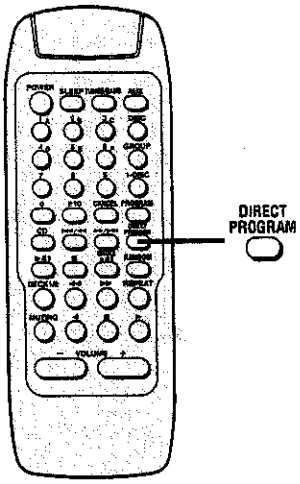
Note

- When you press the MODE button on the changer, the changer automatically cancels the program mode.
- If you enter non-existing track(s), the corresponding indicator illuminates and the entry is included in the count. In the play mode, the changer will cancel the non-existing entry.
- When including the slot No. 0 disc in the program, after programming, press ▶ on the changer or ▶/II on the remote control to start play.

Direct programming

by remote control only

You can add the track in play to your program.
In fact, a good way to build up your program is to listen to tracks and add those you like while they are still being played. It sure makes programming easier if you listen-and-program.

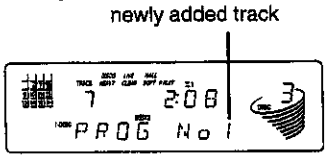


(In the play mode)

Press DIRECT PROGRAM.

The current track will be added to the tail end of the program.

Example Programmed order of the newly added track



The display will return to the original indication after about 3 seconds.

When you make a program as explained under "Program play" on the opposite page, and then perform the above procedure without clearing the program first, the selected track is added to the end of the program.

To check programmed contents

(In the stop mode)

1. Press PROGRAM.
2. Press I◀◀/◀◀ or ▶▶/▶▶I.

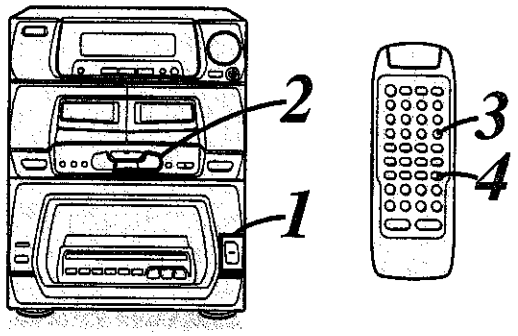
Note

- You cannot add to the program if already full, that is, if already 24 selections have been programmed. If you press DIRECT PROGRAM in such case, the message "FULL" will be displayed. Therefore, direct programming is possible only when 23 or less tracks have been programmed.
- During program play, the DIRECT PROGRAM button does not respond to touch.

Random play

One disc random play

The changer will play all tracks on the current disc in random order.



1 DISC SKIP/ GROUP NAME

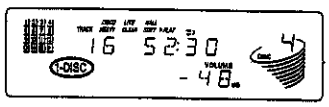
Press either DISC SKIP/ GROUP NAME to select the desired disc.

2 TUNING MODE FM MODE/BP

Press ▶ and check play starts and which disc is being played.
Then, press ■ and stop play.

3 1-DISC

Press 1-DISC.



4 RANDOM

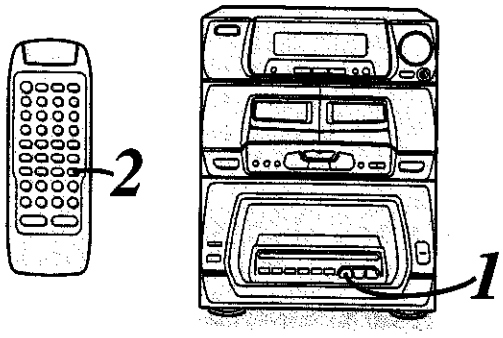
Press RANDOM.
Play will begin.

The changer will stop automatically when all the tracks have been played once.

In the single disc play mode
Only tracks from the disc in slot No. 0 are played, though played in random order.

In the disc grouping play mode
The changer randomly selects one disc from the group and plays the tracks in random order.

Multiple disc random play



Full random play

1 MODE

Press MODE to select "BLOCK".

2 RANDOM

Press RANDOM.
Play will begin.
- Once the changer has played the maximum 72 tracks, it stops automatically.
- The disc in slot No. 0 will not be played.
- If more than 25 tracks have been played, the same track may be played twice.

Program random play

The changer plays the programmed tracks in random order.

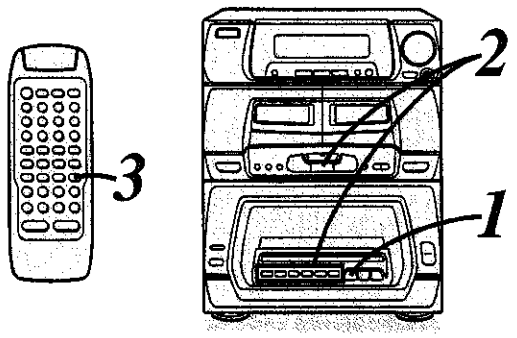
1

Program tracks you want to listen to.
(Follow steps 1–6 on page 18.)

2 RANDOM

Press RANDOM.
Play will begin.
Your program can hold a maximum of 24 tracks. When all tracks have been played, play will stop automatically.

To cancel random play mode
Press RANDOM.
"RANDOM" goes out.



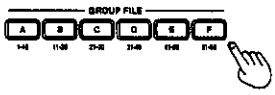
Group random play

The changer randomly plays the tracks in the group in random order.

1

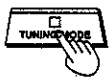
Press MODE to select "GROUP".

2



Press the GROUP FILE button (A–F) for the group you want to play.

Then, press ■ and stop play.



3

Press RANDOM.

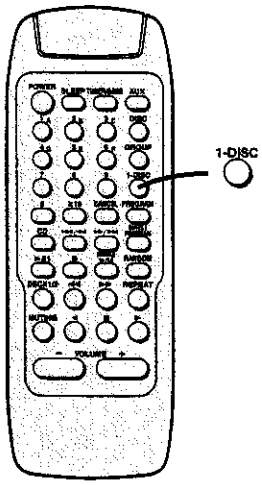
Play will begin.

- Once the changer has played the maximum 72 tracks, it stops automatically.
- If more than 25 tracks have been registered in the group, the same track may be played twice.

1-disc function

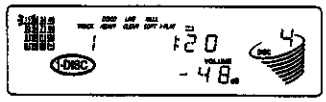
by remote control only

This function is convenient for ending play after the disc in play or the specified disc for which play is about to start has finished.



[Before or during play]

Press 1-DISC.



Press the button again to cancel.
"1-DISC" goes out.
The changer reverts back to the state it was in before this function was turned ON.

For your reference

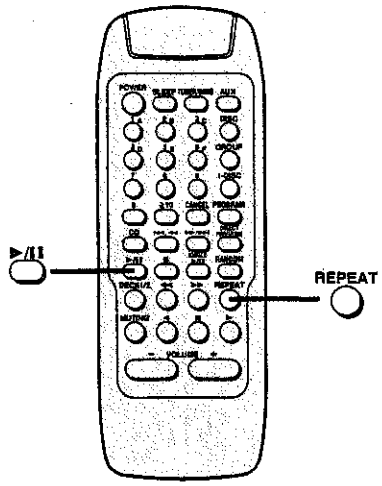
The changer automatically cancels this function in the following cases.

- When the system is switched to the standby mode or the power is turned on
- When the SINGLE PLAY button is pressed
  Single disc play functions the same as 1-disc play.

Repeat function

by remote control only

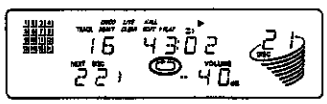
Play will continue endlessly in accordance with the specific play mode selected.



REPEAT

[Before or during play]

Press REPEAT.



Press the button again to cancel.
"↻" goes out.

In the sequential play mode
All tracks of all discs will be played repeatedly.

In the single disc play mode
The changer will repeatedly play the disc in slot No. 0.

In the one disc random play mode
The changer will play all the tracks on the current disc in random order. When finished one round, it will start another and continue endlessly in this manner. The sequence differs each time.

In the full random play mode
Once the changer has played the maximum 72 tracks, it will select a new random sequence and will continue playing.

In the group random play mode
The changer will play all tracks in the group in random order. When finished one round, it will start another and continue endlessly in this manner.

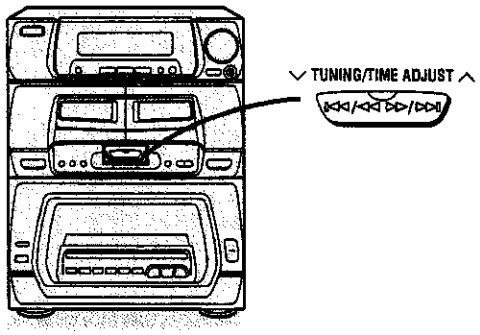
In the program play mode
The changer plays only the programmed selections in the programmed sequence repeatedly.

To repeat the same track over and over
To repeat programmed tracks

1. Select the desired track using the program play procedure on page 18.
2. Press REPEAT to display "↻".
3. Press ►/II.

Search function

You can search rapidly forward or backward on the disc for specific sections.



TUNING/TIME ADJUST

[In the play or pause mode]

Press and hold I◄◄/◄◄ or ►►/►►I.

I◄◄/◄◄: You can search backward.
►►/►►I: You can search forward.

Release the button when you reach the desired point.
The changer will return to the previous mode (play or pause).

In the program/random play mode
You can search forward or backward only within the current track.

In other play modes
You can search forward and backward only within the current disc.

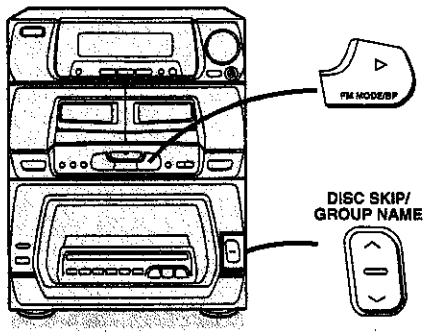
For your reference

The search function will begin slowly, and then, if the button is held down for longer than 3 seconds, it will change to high-speed search.

Skip functions

To skip discs

Use this function to skip discs when selecting a disc which you wish to listen to.



Press either DISC SKIP/ GROUP NAME (∧ or ∨) until you reach the desired disc.

∧: Skips forward to next disc.
∨: Skips backwards to the preceding disc.

The changer skips over empty slots.

When you select a disc and press ▶, the changer will skip to the selected disc and will start play there.

Note

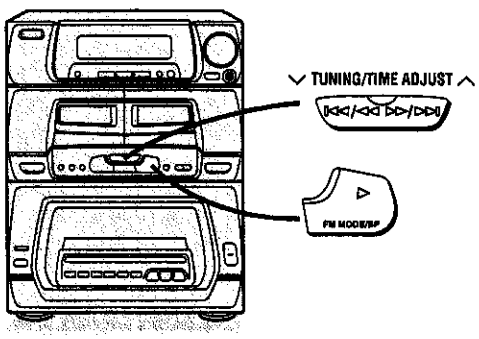
This function is not available during one disc random or program play.

For your reference

If you press the DISC SKIP/GROUP NAME buttons intermittently, the slot Nos. change slowly. If you hold the buttons down, the changer fastskips through numbers.

To skip tracks

Use this function to skip tracks when selecting a track which you wish to listen to.



Press either ⏮/◀◀ or ▶▶/⏭ until you reach the desired track.

⏮/◀◀: You can skip backward.
▶▶/⏭: You can skip forward.

When you select a track and press ▶, the changer will skip to the selected track and will start play there.

In the sequential/single disc/disc grouping/program play mode

You can skip only within the current disc.
In the program play mode, you can skip from one track to another in the programmed sequence.

⏮/◀◀: You can skip to the beginning of the track being played. If you press this button again quickly, you can skip to the beginning of the previous track.
Remember that in a backward skip, the current track is included in the count.

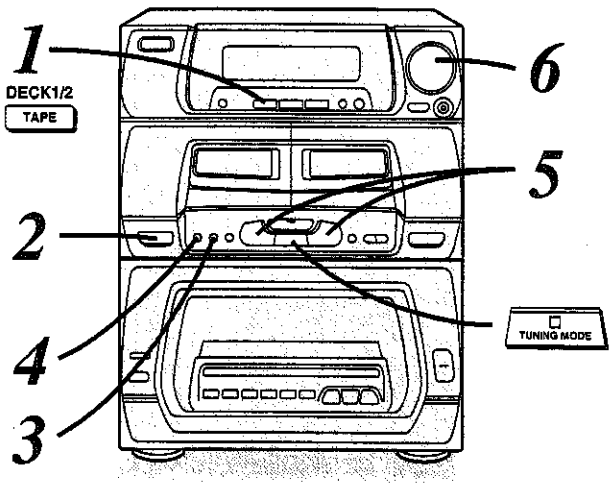
▶▶/⏭: You can skip as many tracks as the number of times you press the button.

In the random play mode

⏮/◀◀: You can skip to the beginning of the current track.
▶▶/⏭: You can skip to the beginning of a next track in the random order the changer has selected.

You can also skip tracks when the changer is in the stop mode (except during random play) or pause mode.

Listening to tapes



- You can use either deck 1 or deck 2 for tape playback.
- This page shows an example using deck 1.

1 DECK1/2 TAPE

Press TAPE DECK 1/2.

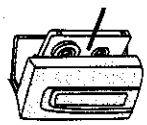
The power will come on automatically, even if the stereo is on standby.

2 DECK 1 ▲ OPEN

Press ▲ OPEN on deck 1, and then insert the tape.

Insert the tape with the exposed tape facing down.
Close the holder.

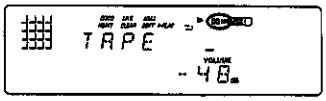
Front side



3 DOLBY NR

Press DOLBY NR if the cassette you want to play was recorded using Dolby noise reduction mode.

If the tape was not recorded using Dolby NR, press DOLBY NR again so that the Dolby NR indicator will go off.



4 REV MODE

Press REV MODE to select the reverse mode.

Each time you press REV MODE, one of the indicators will light up.

- ⇄: The deck plays one side only, and then stops automatically.
- ⇄: The deck plays both sides, and then stops automatically.
- ↻⇄: The deck plays both sides 8 times, and then stops automatically.

When you load tapes into both decks; series playback will be selected. (See page 25.)

5 MEMORY/SET ▷ FM MODE/BP

Press ◄ or ► to start playback.

►: The forward side (front side) will play.
◄: The reverse side will play.

6 VOLUME

Turn VOLUME to adjust the volume level as you like.

To stop tape playback:

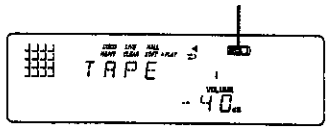
Press ■.

TUNING MODE

To change the deck to be used:

Press TAPE DECK 1/2 to select the deck you want to use when you load cassettes into both decks.

DECK 1 or DECK 2 indicator will illuminate to show which deck you can operate.



Note

Playback is interrupted while playing back tapes, if you open the other deck.

For your reference:

The tape will automatically stop when a different source mode is selected during its operation.

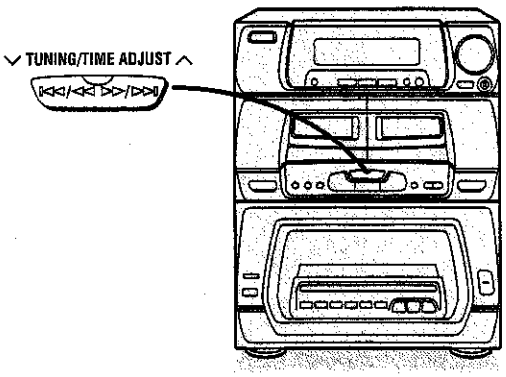
About priority of the deck:

When you load cassettes in both decks, the DECK 1 or 2 indicator will light to show which deck you loaded last.
The system automatically selects "DECK 2" when you turn on the power or whenever you switch to another source and then back to the tape deck.

Type of tape which can be played correctly:

The unit automatically identifies the type of tape.

Normal position/TYPE I	○
High position/TYPE II	○
Metal position/TYPE IV	○



To find the beginning of a program (TPS: Tape Program Sensor)

Press ⏮/◀◀ or ▶▶/⏭ while the tape is playing.

If the forward side (▶) is playing:
▶▶/⏭: The tape will play from the beginning of the next tune.
⏮/◀◀: The tape will rewind to the beginning of the present tune. Then the tune will play again.

If the reverse side (◀) of the tape is playing:
The reverse operation should take place.

Note

TPS is a function that searches for the silent passage in a tape program. So, it may sometimes fail to operate correctly in the following situations.

- When there is no blank space between tape programs (for example, a tape recorded from a microphone)
- When the interval between programs is less than 4 seconds
- When there is a particular low-level passage in a program (for example, classical music)
- When the program is less than 10 seconds, or when it is less than 10 seconds from the beginning of the program to the beginning of the next program
- When a tape is recorded with fade-ins or fade-outs

To fast-forward or rewind the tape

Press ⏮/◀◀ or ▶▶/⏭ while the tape is in the stop mode.

If the forward side (▶) of the tape is selected:
▶▶/⏭: The tape will be fast forwarded.
⏮/◀◀: The tape will be rewound.

If the reverse side (◀) of the tape is selected:
The reverse operation will take place.

Series playback

1. Press ⏏ OPEN on decks 1 and 2, and then insert the tapes. Insert the tape in deck 1 with the side that you wish to listen to first facing you.
2. Press DOLBY NR if the cassette you want to play was recorded using Dolby noise reduction mode.
3. Press REV MODE to select "c⇄⊃" mode.
4. Press TAPE DECK 1/2 to select deck 1. "DECK 1" will light up.
5. Press ▶.

① Forward side of tape in deck 1 ←
↓
② Reverse side of tape in deck 1
↓
③ Forward side of tape in deck 2
↓
④ Reverse side of tape in deck 2 ——┘

- After repeating above operation 8 times, the tape will automatically stop.
- You can also start playback from a position other than the forward side in deck 1 (①). In this case, too, the deck counts 1 time after finishes playback of the reverse side of tape in deck 2 (④).

To stop tape playback:
Press ■.

For your reference

You cannot select Dolby NR for one deck but not the other. We recommend you use tapes of the same type (Dolby noise reduction).

About Dolby Noise Reduction system

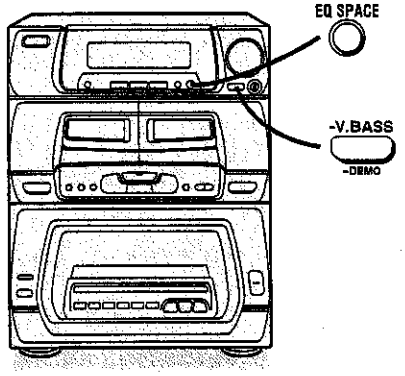
Using Dolby NR reduces tape hiss in the high-frequency range. It boosts the level of the high-frequency during recording, and lowers it by the same amount during playback, simultaneously reducing high-frequency interference incurred during the recording process.

Noise is reduced to about one-third.
Use this system when playing back tapes recorded by the Dolby-B noise-reduction system, such as prerecorded music tapes, etc.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

Changing sound quality and field

for playback only



Selecting sound quality and field

Base your selection on the type of music and how you want to listen to it.

Press EQ SPACE to select the desired mode.

Each time the button is pressed, the indication will change as follows.

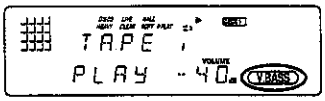
DISCO→LIVE→HALL→HEAVY
↑
FLAT←SOFT←CLEAR←┘

DISCO: Use to reproduce a long reverberating sound like that heard in discotheques.
LIVE: Use primarily for vocal pieces to add gloss to the vocals.
HALL: Use to impart a deep bass and spread which will make you feel as if you were in a large concert hall.
HEAVY: Use to add "punch" to rock and other music.
CLEAR: Use to clarify the treble range of jazz, etc.
SOFT: Use to listen to background music, etc.

To cancel the mode:
Press EQ SPACE to select "FLAT".

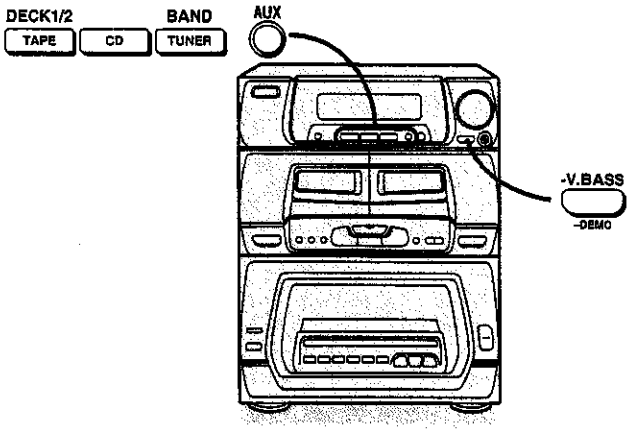
Adding bass

Press -V. BASS/–DEMO.



Press the button again to cancel.
"V. BASS" goes out.

Convenient functions



Easy play

When you load a CD or cassette in advance, you can start play directly from standby by pressing the appropriate selector button.

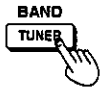
Listening to tapes

Press TAPE DECK 1/2.
- If both decks are loaded with tapes, playback starts from deck 2.
- The reverse mode stores the previously selected mode in memory.

Listening to compact discs

Press CD.
- Play will begin from the disc that you last heard.
- When the tracks has been programmed, the play will start in the programmed sequence.

Listening to radio broadcasts



Press TUNER BAND.
You can receive the station last tuned in.

Listening to external units

Press AUX.
The stereo will turn on and the unit connected to the "AUX" terminals will be selected as the input source.

Demo function

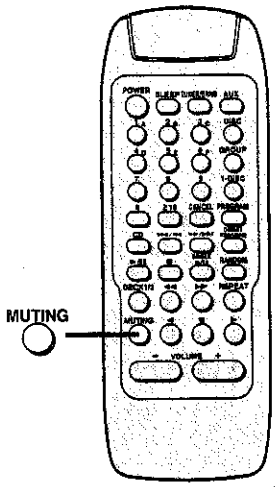
This stereo comes with a "demo" function. The default setting is for the demo function to be ON.

Switching the demo function on or off:
Press and hold -V.BASS/–DEMO for about 2 seconds or more.

When the demo function is set to on:
- **When the power is ON:**
  When the input source is set to "CD" or "TAPE", the demo function will run automatically after about 2 minutes or more pass in the stop mode.
  You can turn the demo function OFF any time by pressing ▶ or ■.
- **When the system is in the power standby mode:**
  When you do not set the time, the demo function runs automatically.

Before recording

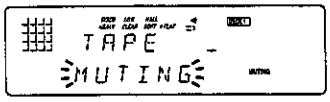
DECK 2 only



To mute the volume by remote control only

This feature is convenient when you have a telephone call, etc.

Press MUTING.



Press the button again to cancel.
"MUTING" goes out.
Muting can also be canceled by lowering the volume all the way (–– dB).

When the system is turned off, the muting operation will be automatically canceled.

Type of tape which can be recorded correctly

The unit automatically identifies the type of tape.

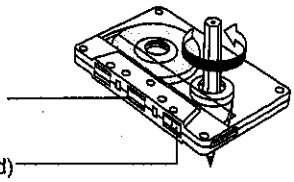
Normal position/TYPE I	○
High position/TYPE II	○
Metal position/TYPE IV	×

Recording may not turn out as you want it to when using metal tapes.

How to advance the leader tape

Wind the leader tape forward so that recording can start as soon as you press the button. But, this is not necessary if edit-recording from CDs.

The leader tape is the first few revolutions that you cannot record on.



Concerning the volume level while recording

The deck automatically sets the recording level. If you change the volume level while recording, it does not affect the recording volume level.

Concerning the sound quality and field while recording

While recording, none of the changes you make to sound quality or field will affect recording.
While recording, "FLAT" is temporarily selected no matter what sound quality and field settings you selected. When finished recording, the stereo will revert back to your settings.

Note

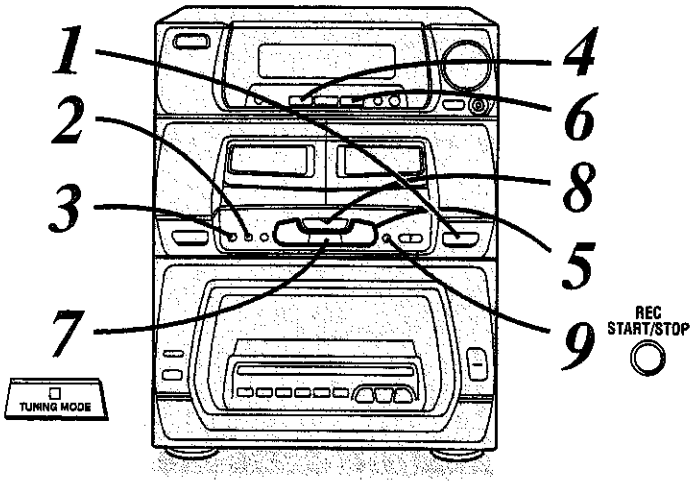
- You cannot open the deck while recording with it.
- You cannot fast-forward or rewind one deck while recording with the other.

To erase a recorded sound

1. Press TAPE DECK 1/2.
2. Insert the recorded tape into deck 2.
3. Press DOLBY NR so that the Dolby NR indicator goes off.
4. Press REV MODE to select reverse mode.
5. Press REC START/STOP.

Your attention is drawn to the fact that recording pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

Recording from radio broadcasts

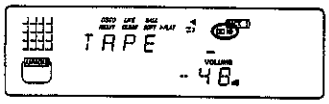


1 DECK 2 ▲ OPEN

Press ▲ OPEN on deck 2, and then insert the tape.
Close the holder.

2 DOLBY NR

When making a Dolby NR recording, press DOLBY NR so that the Dolby NR indicator lights.



3 REV MODE

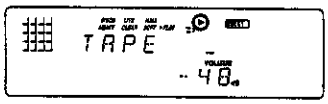
Press REV MODE to select the reverse mode.
- ⇄: One side will record, and then the tape will stop automatically at the tape end.
- ⇉: Both sides will record (forward side→reverse side), and then the tape will stop automatically at the tape end.
- ↻⇉: Same as above. (When you press REC START/STOP, "↻⇉" will be automatically switched over to "⇉".)

4 DECK1/2 TAPE

Press TAPE DECK 1/2 to select "DECK 2".

5

Press ◀ or ▶, immediately followed by ■.
This selects which direction the tape runs in.



▶: Recording from side A
◀: Recording onto side B

6 BAND TUNER

(For United Kingdom)
Press TUNER BAND to select "FM", "LW" or "MW".
(For Australia and N.Z.)
Press TUNER BAND to select "FM" or "AM".

7 TUNING MODE

Press TUNING MODE to select "PRESET".

You can also select the desired broadcast station by tuning manually.
(See page 11.)

8 ∨ TUNING/TIME ADJUST ∧

Press ∨ or ∧ to select the preset channel.

9 REC START/STOP

Press REC START/STOP to start recording.

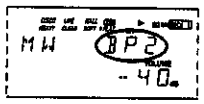
To stop recording
Press REC START/STOP again.
Recording can also be stopped by pressing ■.

To cut an unnecessary part while recording
1. Press REC START/STOP when hearing a unnecessary part.
   The cassette deck will go into the stop mode.
2. Press REC START/STOP when wanting resume recording again.
   Recording will continue in the same direction as before.

To reduce the noise while MW (AM)/LW recording (Beat proof function)

Press FM MODE/BP while recording.

Each time you press the button, BP 1, BP 2 and BP 3 will be displayed alternately.
Select the position where there is less noise.



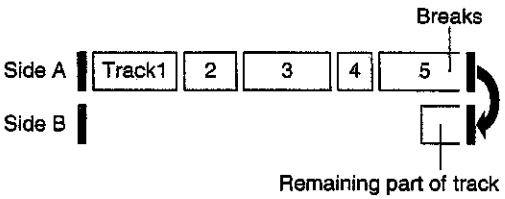
Recording from compact discs

There are 2 ways to record from compact discs, normal recording and one-touch editing.

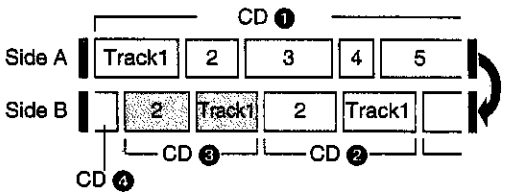
Normal recording

- Tracks are recorded in the order in which they are found on the CD.
- Tracks are cut in the middle when the end of the tape is reached.
- You can record from any point on the tape.

When recording from one disc:



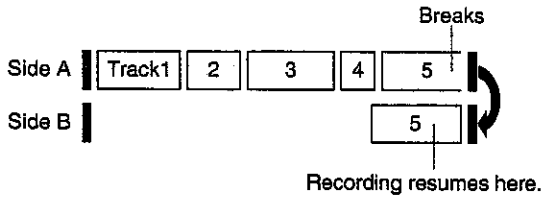
When recording from more than one CD:



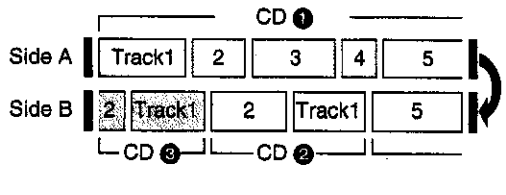
One-touch editing

- Tracks are recorded in the order in which they are found on the CD.
- Tracks are cut in the middle when the end of the tape is reached, but recording is resumed on side B.
- Recording always starts from the beginning of the tape. (Tapes are automatically rewound.)

When recording from one disc:

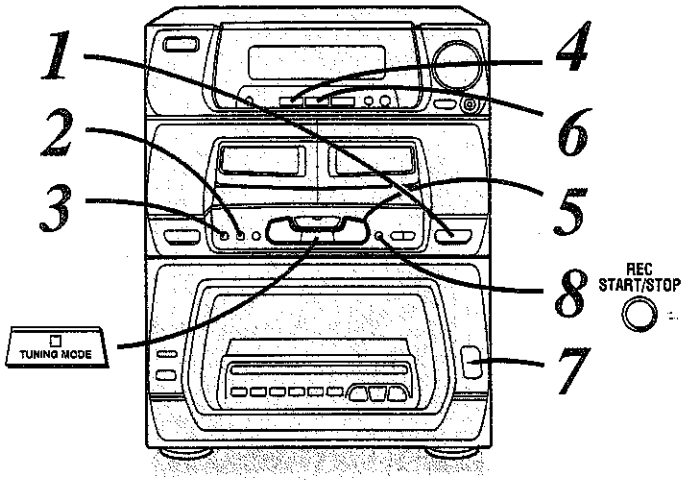


When recording from more than one CD:



The link function automatically turns on between CDs to keep on recording.

Normal recording

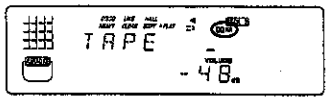


1 DECK 2 ▲OPEN

Press ▲ OPEN on deck 2, and then insert the tape.
Close the holder.

2 DOLBY NR

When making a Dolby NR recording, press DOLBY NR so that the Dolby NR indicator lights.



3 REV MODE

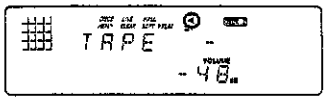
Press REV MODE to select the reverse mode.
⇄: One side will record, and then the tape will stop automatically at the tape end.
⇄↻: Both sides will record (forward side→reverse side), and then the tape will stop automatically at the tape end.
↻⇄↻: Same as above. (When you press REC START/STOP, "↻⇄↻" will be automatically switched over to "⇄↻".)

4 DECK1/2 TAPE

Press TAPE DECK 1/2 to select "DECK 2".

5

Press ◀ or ▶, immediately followed by ■.
This selects which direction the tape runs in.



▶: Recording from side A
◀: Recording onto side B

6 CD

Press CD.

7 DISC SKIP/ GROUP NAME

Press DISC SKIP/GROUP NAME to select the disc you want to record.

8 REC START/STOP

Press REC START/STOP to start recording.

To stop recording

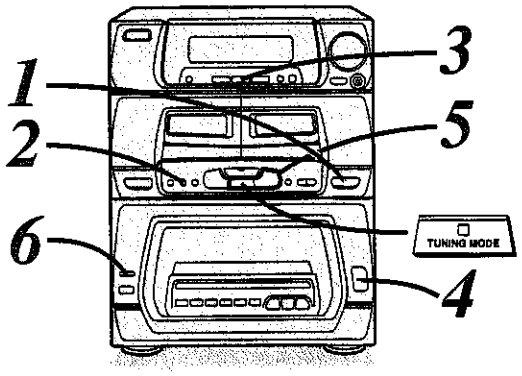
To stop recording after a 4 second silent interval
Press ■.

To stop recording without a silent interval
Press REC START/STOP.
The CD will stop automatically too.

To record programmed tracks

① Perform steps 1–6, and then press PROGRAM on the remote control.
② Press DISC on the remote control.
③ Select the disc from the remote control with the numeric buttons.
④ Select the track number from the remote control with the numeric buttons.
⑤ Repeat steps ②–④ until programming all tracks (max. 24 tracks).
⑥ Press REC START/STOP to start recording.

One-touch editing



1 DECK 2 ⏏ OPEN

Press ⏏ OPEN on deck 2, and then insert the tape.
Close the holder.

2 DOLBY NR

When making a Dolby NR recording, press DOLBY NR so that the Dolby NR indicator lights.

3 CD

Press CD.

4 DISC SKIP/ GROUP NAME

Press DISC SKIP/GROUP NAME to select the disc you want to record.

5 TUNING MODE FM MODE/BP

Press ▶ and check play starts and which disc is being recorded.
After checking, press ■ and stop play.

6 CD EDIT

Press CD EDIT to start recording.
The deck starts rewinding the tape.
It takes a little while after the button is pressed for the recording to actually start.

To stop editing
Press ■.
The CD changer also stops.

One-touch editing operation
1. The cassette deck will rewind the tape, and then advance the tape beyond the leader tape while making the non-recorded passage of about 10 seconds.
2. The recording on side A starts.
3. If the last track on side A has not yet finished recording, that track will automatically be recorded again from the beginning of side B.
4. Depending on the length of the tape, the last track on side B may be cut off in the middle.

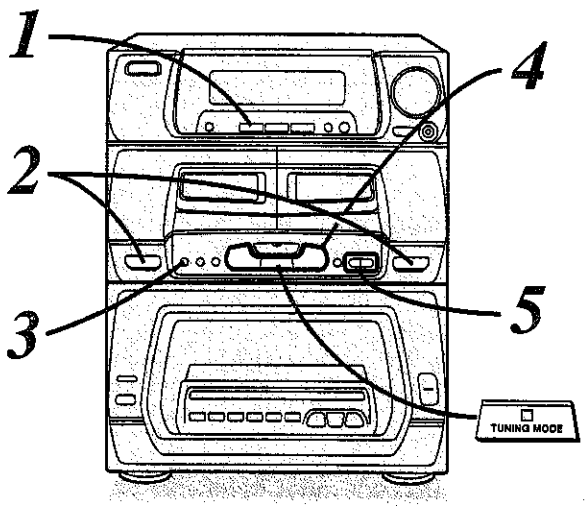
When one-touch editing finishes
- The disc and track Nos. last recorded will remain on the display.
- If there is another CD to record, "LINK" will flash on the display and the stereo will automatically start recording the next CD.
- If there isn't another CD to record, "LINK" will still flash on the display, but the stereo will go on standby. To continue recording, select a disc and press ▶.

To quit linking, press ■.

To record programmed tracks
① Perform steps 1–3, and then press PROGRAM on the remote control.
② Press DISC on the remote control.
③ Select the disc from the remote control with the numeric buttons.
④ Select the track number from the remote control with the numeric buttons.
⑤ Repeat steps ②–④ until programming all tracks (max. 24 tracks).
⑥ Perform above steps 5–6.

Tape to tape recording

Use Deck 2 to record the sound being played back on Deck 1.



1 Press TAPE DECK 1/2.

DECK1/2 TAPE

2 Press ▲ OPEN on both decks, and then insert the tapes.

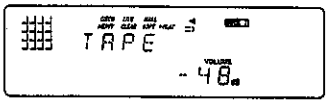
DECK 1 ▲ OPEN DECK 2 ▲ OPEN

For playback: Into deck 1
For recording: Into deck 2
Close each deck's holder.

3 Press REV MODE to select the reverse mode.

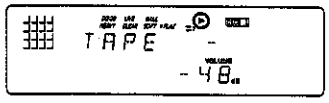
REV MODE

⇄: Single-sided recording
⇄⊃: Two-side recording (forward side→reverse side)
⊂⇄⊃: Same as above (When you press NOR or HIGH, "⊂⇄⊃" will be automatically switched over to "⇄⊃".



4 Press ◀ or ▶, immediately followed by ■.

This selects which direction the tape runs in.



▶: Recording from side A
◀: Recording onto side B
Set both deck 1 and 2 to run in the same direction, side A.
To switch over between decks 1 and 2 Press TAPE DECK 1/2.

To record onto side B, set deck 2 to run in the ◀ direction.

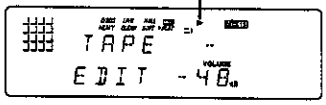
5 Press NOR or HIGH of TAPE EDIT to start recording.

TAPE EDIT NOR HIGH

NOR: Normal speed recording
HIGH: High speed (about 2 times normal speed) recording.

Recording starts at the selected speed.

Tape travel direction indicator



The tape travel direction indicator shows the tape travel direction of the tape for recording.
After recording has finished, both decks will stop.

To stop recording

Press ■.
Both decks will stop.

For your reference

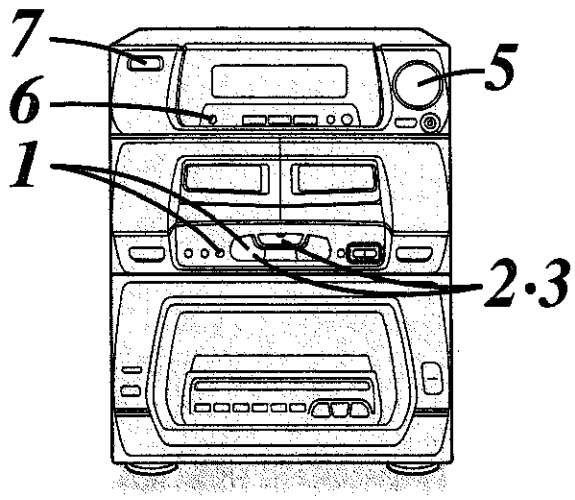
The recording level will be recorded as they are on the tape being played back.

Note

- While making a high-speed recording, move visual units such as TV further away from this unit. It prevents noises from being recorded.
- You cannot record acoustical effects such as bass or changes in sound quality and field.

Using the play timer

- Make sure that you have completed "Setting the time" on page 9.
- Select this timer when you want to use the timer as an alarm clock. You can wake up with listening to music (CD, tuner, tape or aux) at a desired volume level and time.



Preparations **Switch on the power.**
The following example in the figure shows how to set the play timer for playing a CD at −40 dB from 6:30 to 7:40.

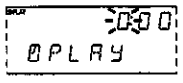
1

CLOCK/ TIMER

① Press CLOCK/TIMER three times to show "◴ PLAY".

Within 7 seconds:

② Press MEMORY/SET.



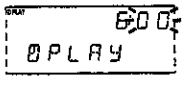
2

"ON" time setting

TUNING/TIME ADJUST

① Press ∨ or ∧ to select the starting hour.

② Press MEMORY/SET.



TUNING/TIME ADJUST

③ Press ∨ or ∧ to select the starting minutes.

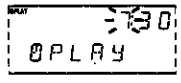
④ Press MEMORY/SET.

3

"OFF" time setting

TUNING/TIME ADJUST

① Press ∨ or ∧ to select the ending hour.

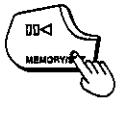


② Press MEMORY/SET.

TUNING/TIME ADJUST

③ Press ∨ or ∧ to select the ending minutes.

④ Press MEMORY/SET.



4 **Select the desired source and then prepare the stereo for play.**

When you play CD(s):
Press CD and insert CD(s).
Stop the CD(s) after playback.
When you play tape(s):
Press TAPE DECK 1/2 and insert tape(s).
Stop the tape deck after you select the direction of the tape.
When you play the radio:
Press TUNER BAND and tune in the desired station.
When you play a unit connected to the "AUX" terminals:
Press AUX.

5

Set the playback volume.

6

Press ⏲ REC/⏲ PLAY.
Your selections and setting will be stored in the timer's memory.
Confirm "⏲ PLAY" lights on the display.

7

Press POWER to put your stereo on standby.
The timer play will start at the preset time with volume increasing gradually up to the volume level you preset.

To check settings (only while power is ON)
Press CLOCK/TIMER 3 times and check "⏲ PLAY" is displayed.
Two seconds later, the display will change in the following order.
① Play start time
② Play over time
③ Play source and playback volume

To change settings (only while power is ON)
① Press ⏲ REC/⏲ PLAY and check "⏲ PLAY" goes out.
② Reprogram from step 1.

To switch the timer OFF
Press ⏲ REC/⏲ PLAY and check "⏲ PLAY goes out.
The settings made with the preceding procedure will however be kept in memory.

Using the timer at the same time setting continuously
(You can accomplish this even if your stereo is on standby.)
Press ⏲ REC/⏲ PLAY and check "⏲ PLAY" is displayed.
As long as "⏲ PLAY" is displayed, the timer will work every morning at the same time.

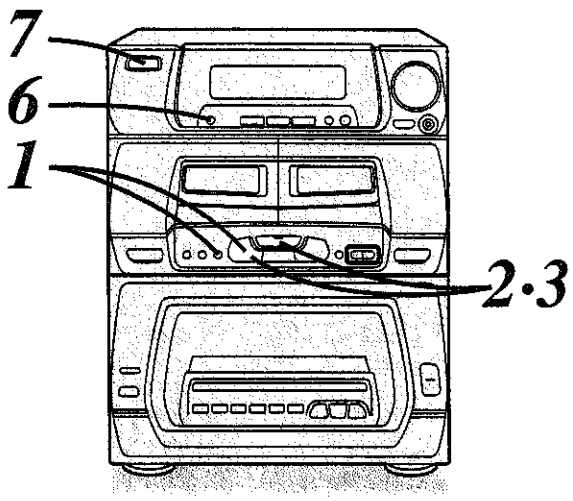
To enjoy the desired source after the timer setting is completed
1. After finishing step 6, start playing the desired source.
   Even if you change the volume level or music source, the timer play will start with the preset condition.
   Note
   When you set the CD changer for timer playback, playback will start with the last disc played and in the last playback mode used.
2. Press POWER to standby mode after enjoying the play, and confirm CD(s) or tape(s) has (have) been inserted.

Note
- If the power is on, the timer will not function. The system must be in the standby mode.
- The ON time and OFF time cannot be the same setting.
- If you switch the power to the standby mode while the play timer is functioning, the OFF time setting will not be activated.
- Play timer cannot be used in combination with the record timer.
- The lowest possible volume with the timer is −60 dB. If you set it lower than this, it will automatically be played back at −60 dB just the same.

For your reference
- External sources must be connected to the "AUX" terminal. However, time settings apply only to this stereo. For more information, see the instruction manual of the connected unit.
- When you insert cassettes in both deck 1 and 2, deck 2 has priority.
- When using the timer with deck 1, be sure not to load the tape in deck 2.

Using the record timer

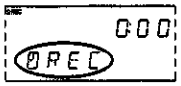
- Make sure that you have completed "Setting the time" on page 9.
- Select this timer when you want to use the timer to record a midnight program or while you are out.



Preparations **Switch on the power.**
The following example in the figure shows how to set the record timer for recording FM broadcasts from 18:30 to 20:00.

1

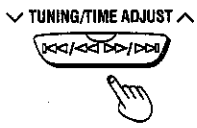
① Press CLOCK/TIMER two times to show "⏲ REC".



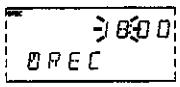
Within 7 seconds:

② Press MEMORY/SET.

2 "ON" time setting



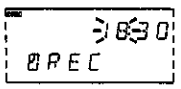
① Press ∨ or ∧ to select the starting hour.



② Press MEMORY/SET.

③ Press ∨ or ∧ to select the starting minutes.

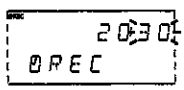
④ Press MEMORY/SET.



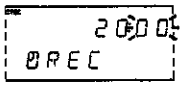
3 "OFF" time setting

① Press ∨ or ∧ to select the ending hour.

② Press MEMORY/SET.



③ Press ∨ or ∧ to select the ending minutes.



④ Press MEMORY/SET.

4 **Prepare for recording.**

1. Insert a tape into deck 2 with the forward side facing you.
2. Select the appropriate Dolby noise-reduction system.
3. Select the reverse mode.
4. Select which direction the tape runs in.
5. Press EQ SPACE to select "FLAT".

5 **Select the desired source and then prepare for recording.**

When you record from the radio:
Press TUNER BAND to select the desired band and tune in the desired station.
When you record from a unit connected to the "AUX" terminals:
Press AUX.

6

Press ⏲ REC/⏲ PLAY.
Your selections and setting will be stored in the timer's memory.
Please confirm "⏲ REC" lights on the display.

7

Press POWER to put your stereo on standby.
Sound will be automatically muted roughly 30 seconds prior to the set time and recording will start.

To check settings (only while power is ON)
Press CLOCK/TIMER two times and check "⏲ REC" is displayed.
Two seconds later, the display will change in the following order.
① Recording start time
② Recording over time
③ Recording source

To change settings (only while power is ON)
① Press ⏲REC/⏲ PLAY and check "⏲ REC" goes out.
② Reprogram from step 1.

To switch the timer OFF
Press ⏲ REC/⏲ PLAY and check "⏲ REC" goes out.
The settings made with the preceding procedure will however be kept in memory.

Using the timer at the same time setting continuously
(You can accomplish this even if your stereo is on standby.)
Press ⏲ REC/⏲ PLAY and check "⏲ REC" is displayed.

To enjoy the desired source after the timer setting is completed
1. After finishing step 7, switch on the power, and start playing the desired source.
   When listening to a cassette tape, use deck 1.
   Even if you change the music source, the timer recording will start with the preset condition.
2. Press POWER to set the stereo on standby after enjoying play, and confirm a tape is inserted in deck 2.

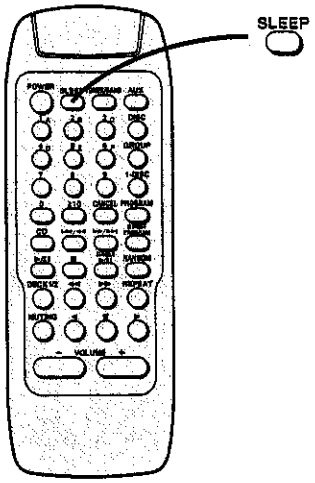
Note
- If the power is on, the timer will not function.
- The ON time and OFF time cannot be the same setting.
- If you switch the power to the standby mode while the record timer is functioning, the OFF time setting will not be activated.
- Play timer cannot be used in combination with a record timer.

For your reference
- Set recording to start roughly two minutes ahead of time.
- External sources must be connected to the "AUX" terminal. However, time settings apply only to this stereo. For more information, see the instruction manual of the connected unit.

Using the sleep timer

by remote control only

The stereo has a sleep timer so that you can fall asleep with the music on and have the system stop by itself. When the set time elapses, the stereo goes into the power standby mode. You have up to 2 hours time available for listening and you can set the timer in 30 minute increments.



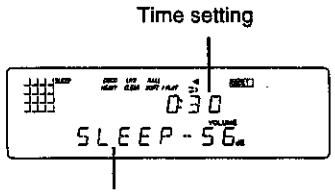
The following example in the figure shows how to set the system to standby mode after 30 minutes.

While enjoying the desired source:

Press SLEEP to select the desired time.

→0:30→1:00→1:30→2:00→OFF

(The display changes each time the button is pressed.)



The system is turned off after the set time has elapsed.

To cancel the sleep timer

Press SLEEP to select "OFF".

To confirm the remaining time

(only while power is ON)
Press SLEEP.

To change the time remaining during operation:

Press SLEEP to show the remaining time then press SLEEP to select the desired time.

Note

The sleep timer turns OFF automatically the moment you attempt to edit-record a CD.

To use two timers together

The sleep timer can be used in conjunction with the play timer or record timer.

Play timer and sleep timer

To go to sleep listening to an FM broadcast, and wake up the next morning listening to a compact disc,

① Program a CD for play timer.
Follow steps 1–6 on pages 33–34.
② Tune in the desired band and station, and adjust the volume.
See page 11.
③ Set the sleep timer.

The volume of the play timer does not change if the volume of the sleep timer is changed.

Record timer and sleep timer

To go to sleep listening to a compact disc, and then to make a timer recording from a radio broadcast,

① Program the record timer.
Follow steps 1–6 on pages 35–36.
② Start CD playback.
③ Set the sleep timer.

Note

Be sure to set the sleep timer to off before the timer recording begins.

Timer priority

The sleep timer always has priority.
Be sure not to overlap timer settings.

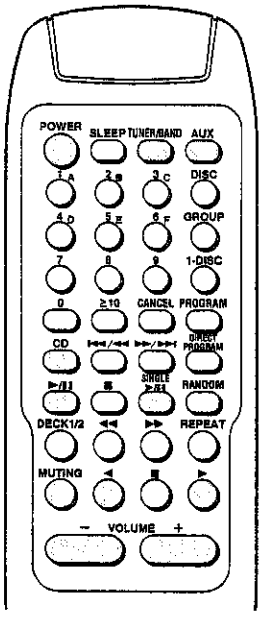
For your reference

The play timer cannot be used in combination with the record timer.

Quick reference of remote control operations

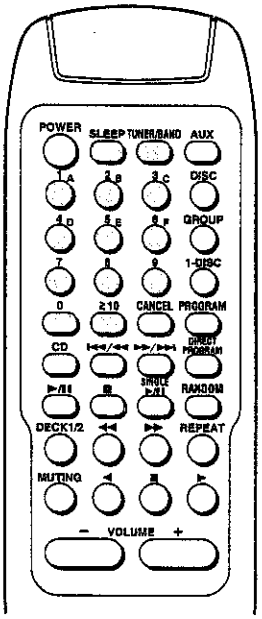
Reference pages indicated in black circles.

Common operation



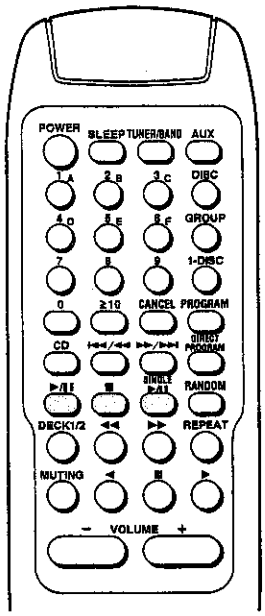
Starting play directly from the power standby condition	TUNER/BAND, ▶/II, SINGLE ▶/II, ◀, ▶, AUX	❷❻
Switching the system on and to the power standby mode	POWER	❾
Selecting the input source	TUNER/BAND, CD, AUX	⓫ ⓭ ❹❷
Adjusting the volume	– VOLUME +	⓫ ⓭ ❷❹
Muting the volume temporarily	MUTING	❷❼

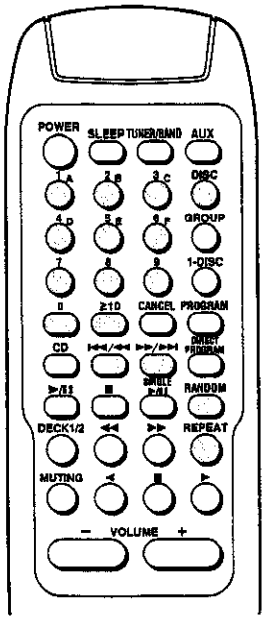
Tuner/timer operation



Listening to radio broadcasts (Preset Tuning)	TUNER/BAND →	⓫
Operating/releasing the sleep timer	SLEEP	❸❼

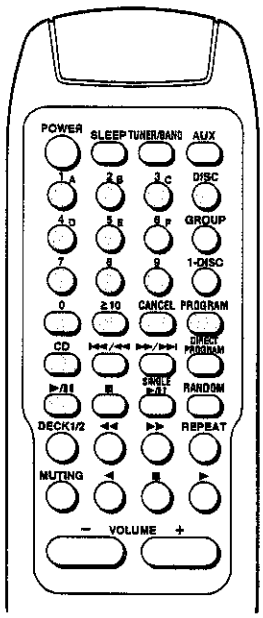
Compact disc section

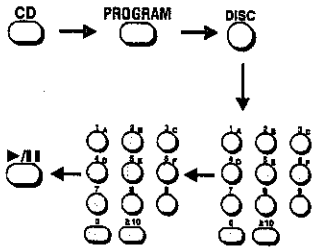
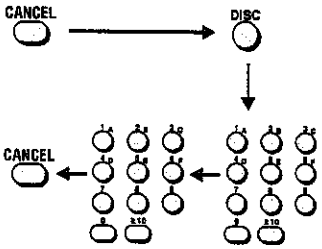
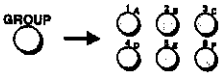
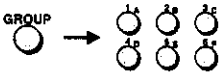


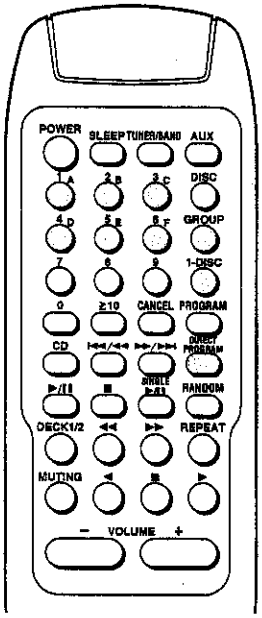


Starting play	▶/II	⓭
Temporarily stopping play	(During playback) ▶/II	⓭
Listening to the disc in slot No. 0	SINGLE ▶/II	⓮
Pausing the disc in slot No. 0	(During playback) SINGLE ▶/II	
Stopping play	■	⓭
Skipping forward/backward	Tap on the buttons repeatedly. ⏮/◀◀ ▶▶/⏭	㉓
Searching forward/backward	Press and hold during playback or in the pause mode ⏮/◀◀ ▶▶/⏭	㉒
Repeating play	(Before or during playback) REPEAT	㉒
Starting play from a particular track	DISC →	⓮
Random play	RANDOM	⓴ ㉑

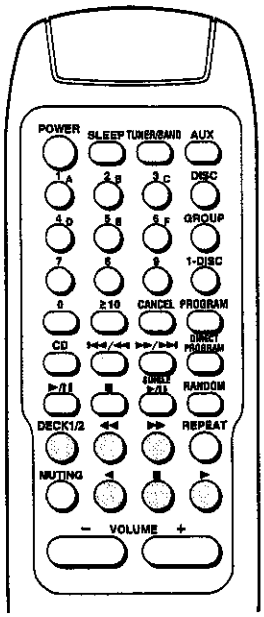
Compact disc section



Playing a particular track you programmed		⓲
Cancelling a particular track you programmed		⓳
Directly programming tracks	DIRECT PROGRAM	⓳
Listening to groups A–F	(In the "BLOCK" mode) 	⓭
	(In the "GROUP" mode) 	⓱
Using the 1-disc function	1-DISC	㉑

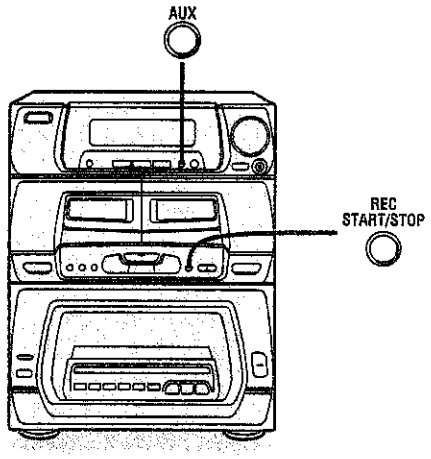


Tape section



Switching between deck 1 and deck 2	DECK1/2	24
Starting playback		24
Fast-forwarding or rewinding the tape	(In the stop mode)	25
Finding the beginning of a track	(During playback)	25
Stopping playback and recording		24 28

Using an external unit



Listening to an external source

(See page 7 for external unit connection)

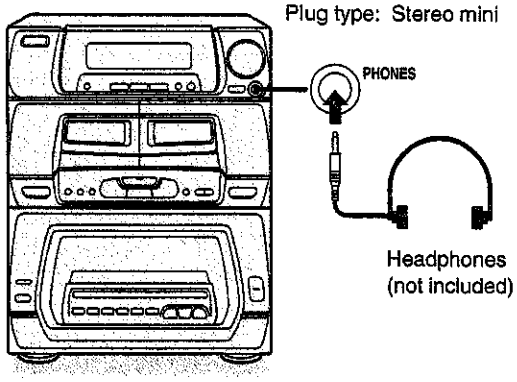
1. Press AUX.
   The power will come on automatically, even if the stereo is on standby.
2. Start playback from the external source. (For details, refer to the owner's manual of the equipment.)

Recording from an external source

1. Follow steps 1–5 on page 28.
2. Press AUX.
3. Press REC START/STOP (recording starts).
4. Start playback from the external source. (For details, refer to the owner's manual of the equipment.)

To stop recording

1. Press REC START/STOP.
2. Stop the source.



Listening with headphones

Note

Connect the headphones to the headphones jack.

- Before connecting, reduce the volume.
- Avoid listening for prolonged periods of time to prevent hearing damage.

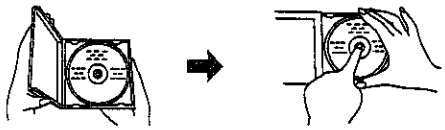
Concerning compact discs

Only compact discs having this mark can be used with this unit.

COMPACT disc DIGITAL AUDIO

To remove a disc from its case

Press the center holder and lift the disc holding by the edges.

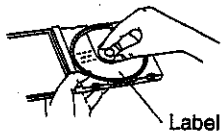


To hold the disc

Hold the disc by the edges so the surface is not soiled with fingerprints.
Fingerprints, dirt and scratches can cause skipping and distortion.

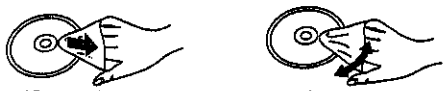
To store a disc in its case

Insert the disc with label facing upwards and press downward at the center.



If the surface is soiled

Wipe gently with a soft, damp (water only) cloth.



If the disc is brought from a cold to a warm environment, moisture may form on the disc

Wipe this moisture off with a solft, dry, lint-free cloth before using the disc.

Improper disc storage:

You can damage discs if you store them in the following places;

- Areas exposed to direct sunlight
- Humid or dusty areas
- Areas directly exposed to a heat outlet or heating appliance

Handling precautions:

- Do not write on the label side with a ball-point pen or other writing utensils.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not soil with fingerprints.

Concerning cassette tapes

Selection of cassette tapes

Cassette tapes of 100 minutes or longer:
These tapes are handy for their long playback and recording time but be careful about repeatedly stopping and starting, rewinding and fast forwarding these tapes in short intervals as they are thin, tend to stretch and may become entangled in the deck mechanism.

Endless-tapes
Failure to operate these tapes correctly may cause the tape to wind around the revolving parts.
For this unit, it is recommended to use the tape which is appropriate to the auto reverse mechanism.

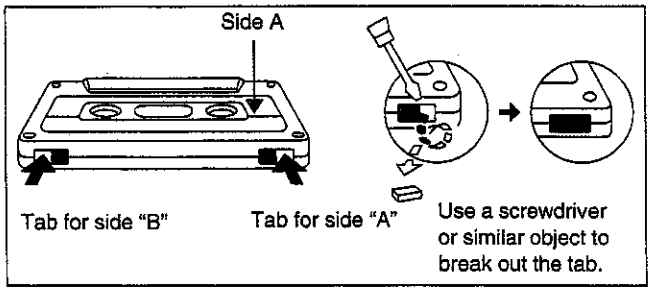
Tape slack

Tape slack may cause the tape to break.

Use a pencil or similar object to take up the slack.

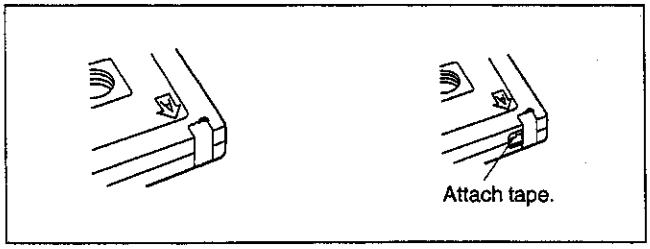
Erasure prevention

Remove the tab(s).



To re-record on a protected cassette

Cover the slot with adhesive tape.



Tape storage

Tapes can be damaged if stored in places such as those described below.

- Where the temperature is high (35°C or higher) or where the humidity is high (80% or higher)
- Where there is a strong magnetic field (near a speaker, on top of a TV, etc.). Recording may become erased.
- In direct sunlight

Maintenance

Maintenance of external surfaces

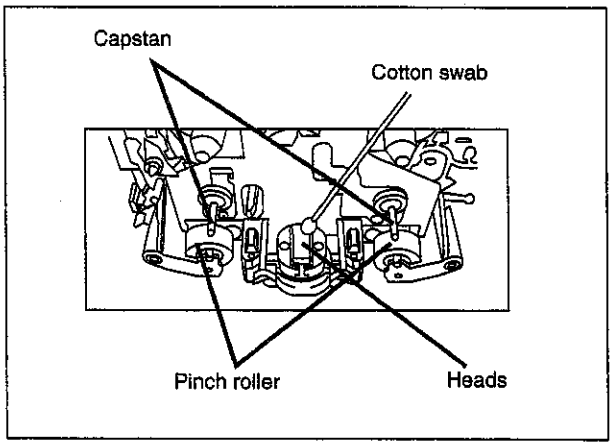
To clean this unit, use a soft, dry cloth.
If the surfaces are extremely dirty, use a soft cloth dipped in a soap-and-water solution or a weak detergent solution.

Wring the cloth well before wiping the unit.
Wipe once again with a soft, dry cloth.
Never use alcohol, paint thinner, benzine, or chemically treated cloths to clean this unit. Such chemicals may damage the finish of your system.

Tape head care

To assure sound quality for recording and playback, be sure to clean the tape heads after approximately every 10 hours of use.

1. Press ▲ OPEN to open the cassette holder.
2. Press POWER to put your stereo on standby.
3. Clean the heads, pinch roller and the capstan shaft with a cotton swab (or with a soft, lint-free cloth) slightly moistened with isopropyl alcohol.
   Do not use any solution other than alcohol for head cleaning.



Suggestions for safety

Placement

Avoid placing the unit in areas of:
- direct sunlight
- high temperature
- high humidity
- excessive vibration
- uneven surfaces (Place the unit on a flat level surface.)

Such conditions might damage the cabinet and/or other component parts and thereby shorten the unit's service life.
To protect the unit against sound distortion and acoustical effects, please place the unit at least 15 cm away from wall surfaces etc.

Ventilation

- Place the unit in a well-ventilated position at least 10 cm away from wall surfaces etc.
- Ensure that curtains and similar materials do not obstruct the ventilation holes.

Stacking

Never place heavy items on top of the unit or the power cord.

Voltage

- It is very dangerous to use an AC power source of high voltage such as for an air conditioner.
  A fire might be caused by such a connection.
- A DC power source can not be used.
  Be sure to check the power source carefully, especially if on a ship or other place where DC is used.

Power cord protection

- Avoid cuts, scratches or poor connection of the AC main cord, as this may result in fire or electric shock.
  Excessive bending, pulling or slicing of the cord should also be avoided.
- Do not pull on the cord when you are disconnecting the power, as this could cause an electric shock. Grasp the plug firmly when you disconnect the power supply.
- Never touch the plug with wet hands or a serious electric shock could result.

Foreign materials

- Ensure that no foreign objects, such as needles, coins, screwdrivers etc., accidentally fall into the unit or through the ventilation holes.
  Otherwise, a serious electric shock or malfunction could occur.
- Be extremely careful about spilling water or liquid on/into the unit, as a fire or electric shock could occur.
  (Disconnect the power plug and contact your dealer immediately if this occurs.)
- Avoid spraying insecticides onto the unit as they contain flammable gases which can be ignited.
- Insecticides, alcohol, paint thinner and similar chemicals should never be used to clean the unit as they can cause flaking or cloudiness to the cabinet finish.

Service

- Never attempt to repair, disassemble or reconstruct the unit if there seems to be a problem.
  A serious electric shock could result if you ignore this precautionary measure.
- If a problem occurs during operation (the sound is interrupted, indicators fail to light up, smoke is detected, etc.) contact your dealer or Authorized Service Center immediately.
- Disconnect the power supply if the unit will not be used for a long time. Otherwise the operation life could be shortened.

Cautions on moving your stereo

Before moving your stereo to another location, be sure to remove all discs from the rack and turn off the stereo.
The changer mechanism automatically locks when the unit is turned off, to protect it against damage in transport. Therefore, always press POWER and make sure "GOOD BYE" appears on the display before you unplug the stereo.
Failure to do so will expose the compact discs and the stereo to the risk of severe damage.

Technical specifications

AMPLIFIER SECTION

1 kHz continuous power output, Both channels driven

DIN	2×35 W (THD 1%, 6Ω)
RMS (1 kHz)	2×50 W (THD 10%, 6Ω)
Input sensitivity	
AUX	250 mV
Input impedance	
AUX	22 kΩ

FM TUNER SECTION

Frequency range	87.50–108.00 MHz
Sensitivity	23.3 dBf (4.0 µV, IHF '58)
Antenna terminal(s)	75Ω (unbalanced)

AM TUNER SECTION

Frequency range	
(For United Kingdom)	
MW	522–1611 kHz
LW	144–288 kHz
(For Australia and N.Z.)	
AM	522–1611 kHz
Sensitivity (S/N 20 dB)	
MW (AM)	500 µV/m

CASSETTE DECK SECTION

Track system	4 track, 2 channel
Heads	
Record/playback	Solid permalloy head
Erasure	Double gap ferrite head
Motor	DC servo motor
Recording system	AC bias 100 kHz
Erasing system	AC erase
Tape speed	4.8 cm/s
Frequency response	
NORMAL	35 Hz–14 kHz
HIGH	35 Hz–14 kHz
S/N	
Dolby NR off	50 dB (A weighted)
Dolby NR on	60 dB (CCIR)
Wow and flutter	0.18% (WRMS)
Fast forward and rewind times	Approx. 120 seconds with C-60 cassette tape

CD SECTION

Sampling frequency	44.1 kHz
Decoding	16 bit linear
Beam source/wave length	Semiconductor laser/780 nm
Number of channels	Stereo
S/N	
SP OUT	85 dB (JIS.A)
Wow and flutter	Below measurable limit
Digital filter	8 fs
D/A converter	MASH (1 bit DAC)

SPEAKER SECTION

(For United Kingdom)	
Type	3 way speaker system
Speaker(s)	
Woofer	14 cm cone type
Midrange	6 cm cone type
Tweeter	Piezo type
Impedance	6Ω
Input power	80 W (Music) 40 W (DIN)
Output sound pressure level	86 dB/W (1.0 m)
Cross over frequency	1.5 kHz, 10 kHz
Frequency range	45 Hz–22 kHz (–16 dB) 52 Hz–20 kHz (–10 dB)
Dimensions (W×H×D)	230×345×251 mm
Weight	3.3 kg
(For Australia and N.Z.)	
Type	3 way speaker system
Speaker(s)	
Woofer	17 cm cone type
Midrange	6 cm cone type
Tweeter	Piezo type
Impedance	6Ω
Input power	160 W (Music) 80 W (DIN)
Output sound pressure level	87 dB/W (1.0 m)
Cross over frequency	1.5 kHz, 10 kHz
Frequency range	43 Hz–22 kHz (–16 dB) 50 Hz–20 kHz (–10 dB)
Dimensions (W×H×D)	230×345×251 mm
Weight	3.5 kg

GENERAL

Power consumption	130 W
Power supply	AC 50 Hz, 230–240 V
Dimensions (W×H×D)	270×347×424 mm
Weight	10.7 kg

Notes:

1. Specifications are subject to change without notice.
   Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

MASH is a trademark of NTT.

Troubleshooting guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers (enclosed with this unit) to locate a convenient service center, or consult your dealer for instructions.

Problem	Probable cause(s)	Suggested remedy	Reference page(s)
Problems common to all systems			
There is no sound when the power is ON.	Volume is set too low.	Adjust the volume level with the volume control.	11, 13, 24
The location of the various musical instruments is not well defined.	The (+) and (–) connections to one of the speakers are reversed.	Connect the speaker cord correctly.	6
The left and right sounds are reversed.	The left and right connections to the speaker are reversed.	Connect the speaker cords correctly.	6
When listening to the external unit, the left and right sounds are reversed.	The left and right connections to the external unit are reversed.	Connect the external unit's cord correctly.	7
Only one speaker is emitting sound.	One of the wires of the speaker cord is disconnected.	Connect the speaker cord correctly.	6
There is no sound when a source is being played.	The (+) and (–) wire of the speaker cords are shorted.	Switch the system to the standby mode, and reconnect the speaker cords so that they are not shorted. Then switch on the power.	6
"ERROR" message appears on the display.	Wrong operation has been done.	Operate the unit correctly by following the operating instructions.	
While listening to FM broadcasts			
There is a "rushing noise" during a stereo broadcast which is not audible during a monaural broadcast.	The transmitting station is a long distance away.	If you are using an indoor antenna, change to an outdoor antenna.	7
You hear excessive noise during a stereo broadcast, and occasionally the sound disappears.	The installation location and orientation of the antenna are unsuitable.		
The stereo indicator flickers and does not light completely.	The transmitting station is a long distance.		
	The power of the TV set or VCR is ON.	Try switching off the TV set or VCR.	
The sound during a stereo broadcast is highly distorted.	There is a building or mountain nearby. [Distortion is caused by interference between the signal from the transmitting station (direct wave) and the signal reflected from the building or mountain (reflected wave).]	Use a high-grade outdoor antenna, and install it in a good location, height, and orientation for reception.	7
While listening to MW (AM)/LW broadcasts			
You hear an unusual beat sound.	You are using the system at the same time you are playing a TV set.	Switch off the TV set, or use the system further away from it.	
You hear a low-frequency hum.	The antenna wire is near the power cord.	Separate the antenna wire from the power cord.	